AT RISK

Recommendations for a Strategy on HIV, Blood-borne Pathogens and Injection Drug Use

The opinions expressed in this publication are those of the Provincial Strategy Team that are submitted to the Chief Medical Health Officer of Saskatchewan Health for consideration in addressing the serious issues of HIV, blood-borne pathogens and injection drug use.

Most of the Provincial Strategy Team's work took place between 1998 and 2000, and the report was finalized in 2002. It is important to note therefore that the environment may have changed since the Provincial Strategy Team completed their initial work.

The issues contained in the report have received increased attention which can be noted by examples like the release of a national paper by the Federal, Provincial and Territorial Ministers of Health entitled, "*Reducing the Harm Associated with Injection Drug Use in Canada*", and the release of the Saskatchewan Government's *Action Plan for Children Exploited in the Sex Trade*. Government reorganization has also caused some of the identified departments, divisions and health districts to be changed, while services and community-based approaches to dealing with these complex issues continue to evolve.

AUGUST 2002

103-00593/

August, 2002

Dr. Ross Findlater
Chief Medical Health Officer
Saskatchewan Health
3475 Albert St.
Regina, SK S4S 6X6

Dear Dr. Findlater:

On behalf of the members of the Provincial Strategy Team on HIV, Blood-borne Pathogens and Injection Drug Use, we are pleased to present our recommendations for the development of a strategy to prevent the spread of blood-borne pathogens among persons who use injection drugs and their partners. The team used a consensus process to come to agreement on the recommendations appearing in the report.

The Provincial Strategy Team has attempted to assure that within its resources and mandate, it has provided you with the most comprehensive information possible on current prevention, outreach and treatment research.

We thank everyone who shared his or her experiences and thoughts with us. The team acknowledges the hard work of Cathy Ellis, Strategy Team Coordinator / Researcher. Among many other things, Cathy was responsible for coordinating team meetings, researching and writing the report, and networking with stakeholders.

We are of the opinion that the recommendations contained in the report will lead to a more comprehensive and co-ordinated approach to the challenge of injection drug use and blood-borne pathogens. The team specifically recommends Saskatchewan Health continue to work on this issue in partnership with other Provincial government departments such as Education, Social Services and Justice, First Nations and Métis peoples, the federal government through Health Canada, First Nations and Inuit Health Branch, and local health authorities, particularly health districts.

Yours sincerely,

Kathy Donovan

Arlo Yuzicapi-Fayant

Kathleen Donovan

Co-chairs
Provincial Strategy Team on HIV, Blood-borne Pathogens and Injection Drug Use

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EXECUTIVE SUMMARY

This report provides the background for the recommendations of the Provincial Strategy Team. Its mandate was to investigate the transmission of HIV and other blood-borne pathogens through injection drug use and make recommendations to the Chief Medical Health Officer. The report recommends a non-judgmental, public health approach in order to address the complex issues of HIV, blood-borne pathogens and injection drug use. It respects the wide range of alternative prevention and intervention options. An essential step to understanding the message of this report is recognizing injection drug use as, first and foremost, a health and social issue.

Although alcohol and tobacco are the most widely used psychoactive drugs in Canada and cause the greatest overall harm and cost to Canadians, the most direct harm from illicit drugs occurs in populations of persons who use injection drugs. It is estimated that in Saskatchewan about 3,500 people inject drugs on a regular basis.

In 1998, injection drug use as a sole risk factor in Saskatchewan accounted for 38.5% of new human immunodeficiency virus (HIV) cases and 71% of reported hepatitis C cases where risk factors were identified. As of December 1998, there were 396 reported cases of HIV. One hundred and forty-five cases, most of which were reported previously in Saskatchewan as HIV positive cases, had progressed to acquired immunodeficiency syndrome (AIDS). Since the introduction of data collection for hepatitis C in 1991, until the end of 1998, 3,679 cases of hepatitis C were reported. Injection drug use has been increasing within the last few years as a major risk factor in Saskatchewan for acquiring HIV and hepatitis C.

In Saskatchewan, women, Aboriginal people, youth, and offenders in correctional facilities are at increased risk of contracting HIV and hepatitis C through injection drug use. Women often encounter more discrimination than men and have greater difficulty in seeking treatment for addictions. Métis and First Nations people need safe culture-based support services that are developed and delivered by Aboriginal people. More youth, less than 20 years of age, receiving addictions treatment services are using injection drugs than previously reported. Injection drug use and tattooing in correctional facilities increase offenders' risks for contracting HIV, hepatitis C and other blood-borne pathogens.

The costs of dealing with injection drug use and its consequences are high. Studies estimate annual direct government costs for an untreated person using injection drugs at $33,761. In 1996, the lifetime cost of treating people with HIV/AIDS in Canada was estimated at $150,000 per person.

As the costs of anti-retroviral medications increase, so do the overall costs of treatment.

Recommendations within this report include ensuring a public health approach in addressing the issue, establishing a committee, and hiring a provincial coordinator to oversee and support the implementation of the recommendations. A public health approach to injection drug use, which incorporates harm reduction principles, has the following objectives: 1) preventing initiation into drug use; 2) helping persons who use injection drugs to stop using drugs; 3) assisting persons who use injection drugs to decrease their drug use; and, 4) developing new and safer practices for those continuing to use drugs.

Other sections in the report recommend:

- providing education and outreach services
- addressing the social determinants of health with respect to injection drug use
- expanding harm reduction services (such as needle exchange programs that are culturally and gender appropriate and extend to correctional facilities)
- providing accessible and adequate addiction treatment services
- supporting research on injection drug use and addictions to enhance understanding of the issue.

Education is needed not only for persons who use injection drugs, but also for those who work with them, such as justice workers and health care professionals. Education needs to take place in the institutions where children learn, where police and justice workers study, and where health professionals train. For those using injection drugs, better access is needed to both formal and informal learning opportunities about addictions and the prevention of injection drug use. Education on how to prevent the spread of blood-borne pathogens is critical. The report suggests that this be best accomplished through peer outreach programs that are culture, gender and age-specific. It recommends involving people who use or have used injection drugs in the development of any education initiatives.

Social determinants of health that affect people who use injection drugs and their families include poverty, inadequate housing, lack of education and job training, child abuse, family violence and involvement in the sex trade. A significant proportion of persons who use injection drugs have grown up in an environment where problems of alcohol and/or substance dependence, mental illness, poverty, violence and child abuse have occurred. The report recommends that all government departments and policy makers review policies, explore strategies and commit the necessary resources to address the major social determinants leading to injection drug use.

Harm reduction is part of a public health approach in addressing high-risk behaviours that place first priority on reducing the negative consequences of the behaviour, rather than on eliminating the behaviour. Studies world-wide show decreases in the spread of disease, deaths due to overdose and criminal activity, in addition to increases in family stability and productivity when comprehensive harm reduction services are instituted. Needle exchange and methadone programs are examples of harm reduction services.

Needle exchange programs distribute sterile needles to persons using injection drugs in order to reduce the spread of blood-borne pathogens. Regina, Saskatoon and Prince Albert have needles exchange programs. The report recommends that needle exchange programs be expanded to other health districts and that correctional facilities in Saskatchewan continue to investigate and implement internationally recognized best practices around needle exchanges. Recommendations emphasize that needle exchange programs be flexible, culturally acceptable, accessible, age and gender appropriate, user-friendly, employ appropriate outreach personnel, and involve people who use or have used injection drugs in their design, implementation and evaluation.

Methadone maintenance therapy has emerged as an excellent treatment for opiate-dependent persons. Both the number of physicians prescribing and the number of pharmacies dispensing methadone in Saskatchewan have increased in the last few years. Integrated methadone programs that meet individual medical and social needs such as life-skills training, education, psychological counselling and job training have been shown to be very effective. This report recommends that adequate medical withdrawal management services be accessible to each health district and that all clients in detox settings be informed of available methadone maintenance therapy for opiate-dependency.

Abstinence-based treatment programs have been successful for many people who use injection drugs and must continue to be a resource as part of an inter-sectoral, public health approach in the province. For those who choose abstinence-based treatment programs and who are unsuccessful, an immediate priority is to decrease the negative effects of drug use. The report recommends that alcohol and drug treatment services offer a continuum of treatment options, incorporate harm reduction principles and offer culturally appropriate, specialized services geared to the needs of Aboriginal people, youth and women. Alcohol and drug treatment services need to address comprehensive client needs, such as barriers to accessing services, mental health issues, child-care, housing and vocational training.

More local research is needed to understand the contextual factors, such as norms and social relationships within the injection drug-using subculture. Research is required to enhance understanding of the context within which injection drug use occurs in order to direct program planning. This report acknowledges the diversity in working with clients, families and communities affected by injection drug use and suggests that research, strategies and interventions arising from the recommendations be community-based and reflect input from consumers.

The issues surrounding injection drug use are many, complex and controversial. It is clear that a multifaceted, intersectoral approach is needed to build capacity and foster collaboration between communities and governments in responding to these recommendations. The key to long-term prevention of blood-borne diseases is the willingness of all stakeholders to address the determinants of health underlying injection drug use.

RECOMMENDATIONS AND BACKGROUND REVIEW

1.1 List of Recommendations

1.2 Introduction: A call for a Public Health Approach

1.3 Epidemiology of HIV and other Blood-borne Pathogens

1.4 Injection Drug Use

1.1 List of Recommendations

The Provincial Strategy Team recommendations developed through the body of the report are collated here to provide easy reference. The section of the report related to each recommendation is indicated in brackets.

1. a)That ensuring harm reduction remains a constant principle in addressing blood-borne pathogens and injection drug use in Saskatchewan;

   b) That Saskatchewan Health establishes an inter-sectoral committee to follow-up on the recommendations of the Provincial Strategy Team on HIV, Blood-borne Pathogens and Injection Drug Use; and,

   c) That the inter-sectoral committee will monitor progress and provide a report every two years to Saskatchewan Health with copies to the member organizations (section 1.2).

2. That a provincial co-ordinator be hired to oversee and support the implementation of this strategy (section 1.2).

3. That all agencies that deal with persons who use injection drugs should review their policies to reflect that addiction to injection drugs is first and foremost a health and social issue (section 1.4.1).

4. That peer outreach programs be created or strengthened to reach persons who use injection drugs and their partners (section 2.1.1).

5. That support is provided for grassroots initiatives and creative interventions. These might include peer-directed groups for persons who use injection drugs, safe houses, alternative housing and drop-in centres (section 2.1.1).

6. That all levels of government and community-based agencies collaborate to ensure a continuum of service options to address the diverse needs of children and youth. These should include:

   a) age-appropriate treatment programs for youth (17 and under) and young adults (18 to 25 years);

   b) prevention programs for high-risk youth and children; and,

   c) crisis intervention services for youth and children (section 2.1.2).

7. That a core education and treatment program on issues related to self-esteem, abuse, addictions, sexually transmitted infections, blood-borne pathogens and harm reduction be offered to young offenders in each level of custody. At-risk youth would have input into the development of such programs (section 2.1.2).

8. That the unique issues faced by Aboriginal youth be identified and reflected in programming (section 2.1.2).

9. That anonymous HIV testing with pre- and post-test counselling be available (section 2.1.2).

10. That suitable latex and non-latex condoms including lubricant and appropriate education be made available to young offenders in a discrete manner (section 2.1.2).

11. That Saskatchewan Health, in consultation with the departments of Social Services, Education, Justice, police, community-based organizations, and involved agencies, develop expertise and identify resources for education and training regarding the determinants and prevention of injection drug use and the spread of blood-borne pathogens among persons who use injection drugs (section 2.1.3).

12. That adequate continuing education including addictions, 'Standard Precautions', harm reduction and methadone use be provided to physicians, nurses, pharmacists, counselors, social workers, police, correction workers and community workers (section 2.1.3).

13. That persons who use injection drugs, ex-users and persons living high-risk lifestyles be involved in the education of healthcare professionals and social services personnel (section 2.1.3).

14. That a community development model engaging various sectors of the community be used to frame prevention initiatives (section 2.1.3).

15. That there be increased undergraduate, post-graduate, and continuing education training for all physicians in the areas of screening, diagnosis and treatment of patients with substance dependence disorders; that the College of Medicine make available faculty development, resident training, and accreditation in addiction medicine (section 2.1.3).

16. That the College of Physicians and Surgeons of Saskatchewan review the current literature on the indications for, and prescribing of Ritalin to ensure appropriate education is delivered to physicians (section 2.1.3).

17. That the Saskatchewan Institute of Applied Science and Technology, Saskatchewan Justice, police colleges and other programs that provide training to correctional officers and police include in their curricula information on Standard Precautions, harm reduction, infectious diseases, and the implications of blood-borne pathogens for persons in prison (section 2.1.4).

18. That Health District Communicable Disease staff, in collaboration with correctional centre nursing staff, provide in-depth education regarding Standard Precautions, post-exposure prophylaxis, harm reduction and prevention of HIV/blood-borne pathogens to offenders and corrections staff (section 2.1.4).

19. That police college training include the public health benefits of the harm reduction approach and education on the determinants of substance abuse (section 2.1.4).

20. That persons who use injection drugs, ex-users and persons living high-risk lifestyles be involved in the education of justice workers and the police (section 2.1.4).

21. That the Saskatchewan Government and Health Canada (First Nations and Inuit Health Branch), the Federation of

Saskatchewan Indian Nations, and the Métis Nation - Saskatchewan research and develop effective approaches for a media strategy to prevent drug misuse (section 2.1.6).

22. That all government departments and policy makers review their policies, explore strategies, and commit the necessary resources to address the major social determinants leading to injection drug use such as poverty, leaving school early, family breakdown, domestic violence, physical and sexual abuse (section 2.2.1).

23. That interagency partnering be expanded to develop strategies to prevent the sexual exploitation of children (section 2.2.1).

24. That research be conducted in Saskatchewan on the contextual factors (e.g., social relationships, norms, attitudes, societal biases, economics, support systems) that influence risk reduction, injection practices, and lifestyles in the injection drug-using subculture in order to guide program planners in developing services to prevent and/or modify high risk behaviours (section 2.2.1).

25. That all levels of government examine ways and means of increasing the availability of appropriate housing. This may encompass a range of settings including community homes, independent living arrangements, and transition houses for recovering addicts and acknowledge the particular vulnerability of women, children and the disabled, in order to reduce exposure to a drug-using environment (section 2.2.1).

26. That youth, women and Aboriginal-specific research be undertaken in the areas of prevention, treatment, and evaluation (section 2.2.2).

27. That all levels of government encourage research and explore strategies to address negative effects of Indian residential schools and to assist in the healing of Aboriginal people (section 2.3.6).

28. That adequate financial, family and social support, life-skills and vocational training be available to those involved in the sex-trade in an effort to provide them with alternate choices (section 2.2.3).

29. That all programs recognize and honour diversity in working with clients, families and communities (section 2.2.4).

30. That strategies and interventions arising from the recommendations be community-based, where appropriate, and reflect input from consumers (section 2.2.4).

31. That the overall approach to dealing with injection drug use in the prevention of blood-borne pathogens emphasize harm reduction, be non-judgmental, and respect the wide range of alternative prevention and intervention options (section 2.2.4).

32. That interagency co-operation and collaboration be continued and strengthened, allowing multiple entry to services needed by persons who use injection drugs and others affected by injection drug use (section 2.2.4).

33. That Saskatchewan Health and Health Canada (First Nations and Inuit Health Branch), the Federation of Saskatchewan Indian Nations and Métis Nation Saskatchewan work in partnership with communities,health districts, pharmacies, and professional organizations to develop multiple, accessible sites that provide sterile needles, recovery and disposal throughout the province (section 2.3.1).

34. That needle exchange programs be designed to be flexible, culturally acceptable, accessible, gender and age appropriate, user friendly, use appropriate outreach personnel, and involve persons who use injection drugs and ex-users in their design, implementation and evaluation (section 2.3.1).

35. That needle exchange programs include, where possible, basic core support including medical, addiction and general counselling services, referrals, outreach and information; and that trained outreach personnel, including nurses, be hired to provide comprehensive services (section 2.3.1).

36. That Public Health explore, in conjunction with persons who use injection drugs and a broad range of stakeholders, ways to promote public safety education and disposal alternatives for used syringes (section 2.3.1).

37. That needle exchange programs and other health care providers inform persons who use injection drugs of the procedures and risks regarding the use of bleach for cleaning needles and equipment (section 2.3.1).

38. That the Saskatchewan Pharmaceutical Association encourages pharmacies to sell small quantities of needles and provide discrete sharps disposal (section 2.3.1).

39. That Saskatchewan Health, health districts, Health Canada First Nations and Inuit Health Branch, and Tribal Councils, encourage and ensure access to HIV, hepatitis B and C testing and intensify sexually transmitted infection control strategies, including early diagnosis and treatment, enhanced contact tracing and promotion of condom use (section 2.3.2).

40. That Saskatchewan Health expand the criteria for publicly funded hepatitis B immunization to include sexual contacts and the partners of both persons who use injection drugs and sex trade workers; and that Saskatchewan Health explore the feasibility of publicly funded hepatitis A immunization for all persons who use injection drugs and who are susceptible and hepatitis C positive (section 2.3.2).

41. That medical withdrawal management service be accessible to each health district (section 2.3.3).

42. That withdrawal management service providers inform clients of all treatment options available, for example, methadone programs for opiate dependent individuals (section 2.3.3).

43. That the established alcohol and drug treatment delivery system:

    a) is able to offer a continuum of treatment options including harm reduction practices, and;

b) introduces specialized services as required. Such specialized services would address issues including AIDS, HIV and blood-borne pathogen prevention education, Fetal Alcohol Effect and Fetal Alcohol Syndrome, child abuse and survivor issues, family healing, culturally appropriate treatment for Aboriginal people, youth and women's treatment, psychiatric and psychological co-morbidity (section 2.3.3).

44. That emergency rooms, hospital wards, community health centres and correctional services develop protocols for harm reduction interventions for persons who use injection drugs, including access to addiction services personnel (section 2.3.3).

45. That the Saskatchewan Medical Association and Saskatchewan Health review payment codes for case conferencing and client assessment, and review alternate payment options for funding addiction medicine (section 2.3.3).

46. That access to supportive recovery programs is ensured for persons using injection drugs and opiate-dependent persons participating in a methadone program (section 2.3.3).

47. That Aboriginal traditional treatment options be respected and incorporated into treatment services (section 2.3.3).

48. That health districts examine alternative therapeutic options as adjunct therapies in detoxification and drug treatment (section 2.3.3).

49. That barriers to alcohol and drug treatment be addressed. These may include accessibility, availability, child-care, family issues, geography, disabilities, economic and custodial concerns (section 2.3.3).

50. That Saskatchewan Health suggests that health district and community-based alcohol and drug agencies ensure cultural appropriateness in their programs (section 2.3.3).

51. That Health Canada (First Nations and Inuit Health Branch), Saskatchewan Health, health districts, the Federation of Saskatchewan Indian Nations and Métis Nation - Saskatchewan collaborate in addressing substance use issues in their respective jurisdictions (section 2.3.3).

52. That physicians and pharmacists throughout the province actively be encouraged to work together to provide accessible, uniform, coordinated and integrated methadone programs (section 2.3.4).

53. That a comprehensive approach to address the full range of client needs, including addiction counselling, child-care, housing, and vocational training, be established (section 2.3.4).

54. That a local interagency committee with representation from Aboriginal agencies, pharmacists, human service agencies, persons who use injection drugs, police, corrections, mental health, physicians, nurses, addiction and sexual health counselors be established to have input into each local methadone program (section 2.3.4).

55. That clients on a methadone treatment program be assured continuation of their program while accessing withdrawal management services for other substances (section 2.3.4).

56. That results from urine screens be available within three to four days and that point of care urine screens be available in certain circumstances (section 2.3.4).

57. That the College of Physicians and Surgeons of Saskatchewan maintain an effective quality assurance program for physicians prescribing methadone (section 2.3.4).

58. That Saskatchewan Health and Social Services work together to ensure that adequate child-care service options are available to clients including on-site child-care and licensed off-site spaces (section 2.3.5).

59. That a treatment program for females be made available in Saskatchewan (section 2.3.5).

60. That, whenever possible, programs for Aboriginal people be directed, developed and delivered by Aboriginal people (section 2.3.6).

61. That research be carried out on addictions and harm reduction measures in communities and prisons following European and Australian models or other best practices (section 2.3.7). Please refer to recommendations 24 and 27 for other research-related recommendations.

62. That suitable latex and non-latex condoms with lubricant, and appropriate education be made available to offenders in a discrete manner (section 2.5.1).

63. That correctional centres assist and encourage offenders who require antiviral medications to receive them in a confidential manner (section 2.5.1).

64. That voluntary anonymous HIV testing, including pre- and post-test counselling, be available in all correctional facilities (section 2.5.1).

65. That hepatitis A and B vaccine be made available to at-risk offenders (section 2.5.1).

66. That peer education and support such as Aboriginal Peer Health models on HIV/AIDS and other blood-borne pathogens be developed and implemented in provincial and federal correctional facilities in Saskatchewan (section 2.5.1).

67. That appropriate infectious disease, harm reduction programs and gender-specific addiction programs be developed to meet the needs of Aboriginal women offenders (section 2.5.1).

68. That offenders receive specific education on how to clean injection equipment, including information on the risks and benefits of bleach and the time needed to sterilize injection equipment, and that an adequate supply of full-strength bleach be discreetly accessible to offenders (section 2.5.1).

69. That offenders have equitable access to medically supervised methadone programs (section 2.5.1).

70. That Provincial and Federal Correctional Services examine current policies and assess the feasibility of making sterile tattoo equipment and materials available to offenders (section 2.5.1).

71. That correctional facilities continue to investigate and implement internationally recognized best practices around needle exchange (section 2.5.1).

72. That interagency efforts be developed to support post-release client reintegration. Collaboration will facilitate access to housing, social support, addiction counselling, education, and life-skills training (section 2.5.1).

73. That research on Drug Treatment Courts be explored to determine if there would be a better approach to persons using injection drugs who are not involved in violent crimes (section 2.5.3).

74. That courts, prosecutors and police enhance the use of discretionary powers and evidence-based alternative measures in dealing with drug dependent persons. These alternatives could include sentencing circles. Drug Treatment Courts, diversion programs, use of elders and healing lodges to facilitate healing among persons who use injection drugs and are involved in the justice system (section 2.5.4).

75. That police departments develop a database that reports all drug-related crime to better assess the association between crime and substance dependence (section 2.5.4).

1.2 Introduction: A Call for a Public Health Approach

Like other provinces in Canada, greater numbers of Saskatchewan's people are becoming infected with blood-borne pathogens, particularly HIV and hepatitis C virus. Over the last few years the proportion of newly diagnosed cases of HIV and hepatitis C virus (HCV) related to injection drug use increased markedly to approximately 45% and 70% respectively in 1998.

The Provincial Strategy Team on HIV, Blood-borne Pathogens and Injection Drug Use was created with the mandate to study the issues around injection drugs, HIV, and other blood-borne pathogens and make recommendations to the Chief Medical Health Officer (Appendix A: Terms of reference). Eighteen members representing a broad range of community, government, human-service organizations and consumers worked for over two years to develop this strategy and complete documentation of the research evidence included in this report (Appendix B). In the process the team developed its own set of guiding principles (Appendix C).

The objective of a public health approach to drug consumption is to prevent the initiation of drug use, to assist persons who use injection drugs to become non-users, to decrease their drug use, and to develop new and relatively safer norms for those who continue drug use (Erickson, 1990). The current and widely used term, 'harm reduction' is the public health approach as applied to interventions regarding drug misuse. This approach promotes incremental improvements in the behaviours of persons who use injection drugs as practical and achievable goals leading ultimately to greater benefits for people who use injection drugs and to the community.

Poverty and the prevalence of HIV and hepatitis C are strongly correlated in cases other than those related to blood transfusions or treatment with blood products. High levels of unemployment, poor housing, lack of educational opportunities and marginalization affect the same population who are at greatest risk of acquiring HIV and other blood-borne pathogens (BBPs). Strategies to prevent the spread of blood-borne pathogens among persons who use injection drugs and their partners must address the individual's level of education, ability to become fully employed, access to medical care and suitable housing, and other health determinants.

To investigate comprehensively this issue, the Provincial Strategy Team formed four sub-committees: Legal (Corrections and Policing), Public Health, Community-based Organizations and Social Services, and Clinical (Medical and Pharmaceutical areas). Issues relating to Aboriginal persons emerged in all subcommittees, negating the need for a separate subcommittee on Aboriginal issues. However, the Aboriginal members met separately with the researcher to discuss and develop recommendations that would specifically address Aboriginal concerns.

The sub-committees of the Strategy Team developed the recommendations for the report and brought them to the committee for discussion, debate and ratification. Acceptance of the final version of a recommendation was based on a consensus of over 90% of members. Recommendations with less than 75% support were dismissed. Consideration was given to recommendations that obtained 75 to 90% support. These were amended until there was more than 90% support. The recommendations are listed in section 1.1 as well as interspersed throughout the report.

Leadership is required to bring about change with regard to preventing the spread of blood-borne pathogens in persons who use injection drugs.

Recommendations

To provide leadership around the themes contained in the report, the committee made the following recommendations:

1. **a) That a harm reduction approach remains a constant principle in addressing blood-borne pathogens and injection drug use in Saskatchewan;**

   b) That Saskatchewan Health establishes an inter-sectoral committee to follow-up on the recommendations of the Provincial Strategy Team on HIV, Blood-borne Pathogens and Injection Drug Use;

   c) That the inter-sectoral committee will monitor progress and provide a report every two years to Saskatchewan Health with copies to the member organizations;

2. **That a provincial co-ordinator be hired to oversee and support the implementation of this strategy.**

1.3 Epidemiology of HIV and other blood-borne Pathogens

1.3.1 National statistics

HIV/AIDS

From November 1, 1985 to December 31, 1999, there were a total of 45,534 individuals who tested positive for HIV, and 16,236 AIDS cases reported to the Laboratory Centre for Disease Control (LCDC) at Health Canada (Health Canada, 2000b). The HIV epidemic in Canada is changing from affecting mostly men who have sex with men (MSM) and to a lesser extent those who received blood products, to the current situation affecting primarily persons who use injection drugs. There are also increases in the number of HIV cases in women, and in young men who have sex with men.

HIV infections attributed to the category MSM comprised 74.7% of all adult male HIV infections from 1985-1994. By 1999, this category dropped to 37.1% (Health Canada, 2000b). The category of HIV infections attributed to the misuse of injection drugs rose from 8.9% in 1985-1994, to 28.3% for 1999.

AIDS cases

The decrease in the number of AIDS cases over the last few years may be attributed to several factors. These include improved treatment regimes delaying the onset of AIDS, an increase in awareness and education about the risk factors causing AIDS, reporting delays, and underreporting of AIDS cases (Health Canada, 2000b).

MSM is still the biggest risk factor for AIDS cases (40.9% of reported cases in 1999 had MSM as a risk factor) (Health Canada, 2000b). Between 1989 and June 1999, injection drug use as a risk factor for adult male AIDS cases increased from 2.5% to 26.5% (Health Canada, 2000a). An additional 4.8% of adult male AIDS diagnosed in the first half of 1999 have both MSM and injection drug use as major contributing factors. There has been a decline in the number of deaths in Canada related to AIDS, from highs exceeding 1,400 deaths per year in 1994 and 1995, to 249 and 106 deaths reported in 1998 and 1999 respectively (Health Canada, 2000b).

HIV/AIDS and Aboriginal people

Aboriginal persons in some communities are at increased risk for HIV infection because of numerous economic, psychosocial and risk-behaviour issues. The percentage of positive AIDS cases in Canada among Aboriginal people is not known, as only 29.0% of 1999 reported cases had included ethnicity information. The majority of positive test reports including ethnicity were among Caucasians with 67.0% and 60.0% in 1998 and 1999, respectively (Health Canada, 2000b). In 1998, 19.4% of the positive HIV tests were among Aboriginal people as compared to 24.8% in 1999. An increase in the proportion of Aboriginal people among AIDS cases, from 3.4% in 1995 to 14.4% in 1999, has been reported (Health Canada, 2000b). As well, injection drug use as a major risk category among Aboriginal people has increased dramatically over time from 25.4% during 1989-93 to 51.2% during 1994-98 (Health Canada, 1999b). Aboriginal AIDS cases present at younger ages than non-Aboriginal AIDS cases. Twenty-nine percent of Aboriginal, compared to 17.6% non-Aboriginal cases were diagnosed when they were less than 30 years of age. The proportion of Aboriginal women among AIDS cases is higher than the proportion of non-Aboriginal women with AIDS (Health Canada, 2000b).

Recent data from British Columbia and Alberta show that Aboriginal people make up between 15.0% and 26.0% of HIV incidence cases, respectively (Health Canada, 1999b). A 1997 study in Vancouver among Aboriginal HIV positive persons showed that 58.0% reported injection drug use as a risk factor while 14.0% reported MSM (Health Canada).

Interpretation of AIDS data for Aboriginal people in Canada is difficult since 21% of reported cases do not identify their ethnicity. HIV statistics and clinical data are only available for those people who came forward for testing or treatment. As well, anonymous test sites may not record enough data to exclude duplicate reporting. However, available data suggests that Aboriginal people are infected at a younger age than non-Aboriginal people and that injection drug use is an important risk factor (Health Canada, 1999b).

HIV/AIDS among women in Canada

The rates of HIV and AIDS among women are increasing in Canada. There has been an increase in the proportion of adult females being diagnosed with HIV and an increase in those cases being attributed to injection drug use. A total of 24.3% of positive HIV tests were found among adult females in 1999 compared to 19.8% in 1997 (Health Canada, 2000b). As well, in adult females, from 1985-1994, 31.8 % of HIV cases were attributed to injection drug use, while in the first half of 1999, 44.7% of adult female cases were attributed to injection drug use. An additional 26.8% in the same time frame were attributed to sexual contact with a person at-risk (Health Canada, 1999). The proportion of AIDS cases among women has increased from 6.3% of all cases before 1990 to 16.3% in 1999 (Health Canada, 2000b).

Incidence cases for HIV also show an increase in the number of females who use injection drugs. In adult females, in the first half of 1999, 44.7% of cases were attributed to injection drug use (Health Canada, 2000a).

Women who are HIV positive face special problems during pregnancy and birth because HIV infected women can transmit the infection to their babies (vertical transmission). For the last half of 1998, 72.0% of pediatric HIV positive cases (31 out of 43 cases) were attributed to perinatal transmission (Health Canada, 1999e).

HIV and AIDS among adolescents

Although youth aged 10 to 19 years represent a small proportion of the total number infected with HIV, the numbers of new HIV infections in youth are increasing (Health Canada, 1999c).

Of positive HIV tests to the end of December 1998, 1.5% of all cases were youth ages 15 to 19 years, with their risk factors being 40.0% MSM, 24.0% heterosexual contact, 15.0% injection drug use, and 6.0% both MSM and injection drug use (Health Canada, 1999c).

Hepatitis C

Hepatitis C virus (HCV), previously termed non A-non B hepatitis, has emerged as a major public health concern in the last decade. Though recognized earlier, it was not identified as a distinct entity until 1990 with the development of specific diagnostic tests. HCV is now known to be more prevalent among persons who use injection drugs than

HIV (Garfein, Vlahov, Galain, Doherty & Nelson, 1996).

In Canada national reporting of HCV began in 1992. The number of cases has increased dramatically from 1992 (1,321 cases) to 1997 (19,571 cases). This rise is thought to be related substantially to increased testing (Table 1, Health Canada, 1999a). It is estimated that nationally only 30.0% of persons who are positive for HCV know that they have the infection (Health Canada, 1999a). Because current blood tests do not allow the differentiation between newly acquired and long standing HCV cases, those reported each year represents the prevalence (existing cases) of the disease, rather than the incidence (newly acquired hepatitis C within the year).

In Canada hepatitis C is spread primarily through injection drug use (Tepper & Gully, 1997), accounting for about 70.0% of infections (Health Canada, 1999a). The receipt of blood and blood products before 1990 is the second most important risk factor for HCV. However, since the introduction of HCV antibody screening of donated blood (1990), the present risk of transfusion-acquired HCV is almost non-existent (Sandhu, 1999). The risk of acquiring HCV infection after being stuck by a needle contaminated by an HCV-infected person is 4.0% to 10.0% (Daly, 1998). Risk for acquiring HCV through sexual transmission appears to be very low. Transmission from mother to unborn fetus has been reported to be relatively low (Alvarez-Munoz et al., 1997). In British Columbia, babies of HCV-positive mothers tested for HCV at one year of age found vertical transmission rates of 15.0% (Daly, 1998). A recent Italian study showed 5.1% of babies born to HCV positive mothers were positive for HCV after one year, demonstrating the same genotype of HCV. The HCV vertical transmission rate did not appear to be affected by the type of delivery or method of infant feeding (Conte, Fraquelli, Prati, Colucci, & Minola, 2000).

The progression to chronic hepatitis C is usually slow and may not manifest in symptoms for two decades. Since numerous cases of chronic hepatitis C were acquired 15-25 years ago, there will be important increases in the numbers of cases of cirrhosis, liver failure, and the need for liver transplants over the next decade (Health Canada, 1999a).

Hepatitis B

Hepatitis B virus (HBV) infections have been reported to the National Notifiable Disease Registry since 1969; however, the data being reported by the provinces was inconsistent until 1996 (Health Canada, 1999a). Initially, both acute and carrier states of hepatitis B were reported by some jurisdictions, but since 1996 Health Canada has counted only acute cases of hepatitis B. Surveillance data

Table 1: Hepatitis C Cases, Both Sexes Combined, All Ages Canada, 1992 - 1997

Number of reported cases per year						
Year	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Reported Cases	1,319	1,639	2,856	14,232	16,028	19,571

Source: Health Canada, 1999

Table 2: Hepatitis B Cases, Both Sexes Combined, All Ages, Canada, 1993 - 1997

Incidence Rate per 100,000 population					
Year	**1993**	**1994**	**1995**	**1996**	**1997**
Rate/100,000	9.50	10.50	10.10	7.90	5.30

Source: Health Canada, 1999

is known to underestimate the actual rates. The incidence rate of acute hepatitis B appears to be decreasing (Table 2) although the actual number of acute cases may be several times higher due to underreporting associated with public health surveillance (Tepper & Gully, 1997).

In Canada, transmission is primarily sexual, although perinatal transmission and parental transmission (through injecting, tattooing, piercing, sharing of razors, toothbrushes, etc.) can also occur (Tepper & Gully, 1997).

The recent implementation of universal, mainly school-based, hepatitis B immunizations in all provinces and territories is expected to continue the downward trend of HBV in the future (Tepper & Gully, 1997).

Hepatitis D, E, F

There are several other types of hepatitis viruses that have been identified recently (Tepper & Gully 1997). Hepatitis delta virus (HDV) requires hepatitis B virus to replicate, so it always occurs in the presence of hepatitis B. HDV tends to increase the severity of acute hepatitis B infection but decreases the risk of becoming a HBV carrier (Tepper & Gully). The overall prevalence of HDV is low, but persons who inject drugs and who have hepatitis B may be at increased risk.

Hepatitis E is transmitted through the fecal-oral route. It is not a blood-borne pathogen. Hepatitis F is not well known, but has been described in a few cases in France. Routes of transmission have not been determined. A new virus initially termed hepatitis G virus is being investigated and evidence suggests that it may not be pathogenic to the liver.

1.3.2 Prevalence studies in other provinces

The spread of HIV and HCV in the drug injecting population is difficult to control. In British Columbia, Vancouver's Downtown Eastside is the focus of much national concern. In this small geographical area, various programs and strategies are targeted toward the prevention and treatment of HIV and HCV in a large number of persons who inject drugs. Vancouver's 28.0% HIV prevalence rate among persons who use injection drugs in the Downtown Eastside is the highest published rate in North America (Health Canada, 1999d). A prospective cohort study of people who use injection drugs show an HIV prevalence rate of 23% and an HCV rate of 88% (Strathdee et al., 1997).

In Winnipeg, Manitoba, a seroprevalence study on persons who use injection drugs called the Winnipeg Injection Drug Epidemiology (WIDE) Study was completed recently. Preliminary data shows an HIV prevalence rate of over 12% in persons who use injection drugs (Elliot, Blanchard, Dinner, Dawood & Beaudoin, 1999). The WIDE study shows a high level of needle sharing and relatively low use of condoms with casual partners of the opposite sex among at-risk persons. The World Health Organization cautions that when prevalence rates of HIV reach 10%, the epidemic can become extremely hard to control (Riley, 1998). It should be noted that Manitoba has similar demographics to Saskatchewan, but Winnipeg does not.

The Eastern Regions Project in the Cape Breton area of Nova Scotia demonstrated that even rural areas are having problems with HIV among persons using injection drugs (Lior, 1998). The prevalence rate of HIV in a sample of 102 people who use injection drugs in this rural Maritime area was 5%. Among the participants of this study, 72% reported sharing needles and 21% reported sharing needles while in prison (Lior).

1.3.3 Saskatchewan statistics

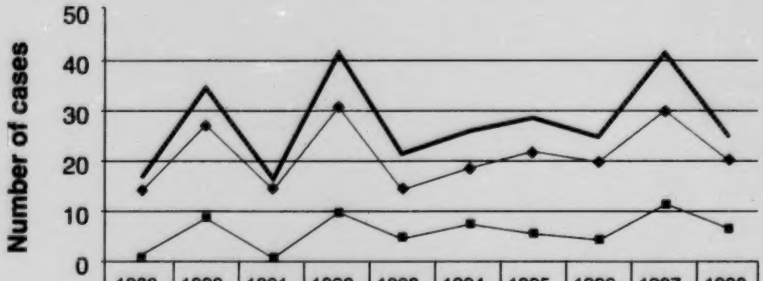
HIV

Reports of HIV cases from 1989 to 1998 range from a low of 16 to a high of 42 cases per year (Figure 1). Seventy-five percent of cases over these years were males. Saskatchewan has reported 396 adult HIV cases to the end of 1998.

Most Saskatchewan residents testing positive for HIV are in the 30-39 age group category, but a substantial percentage (35.0%) of positive tests come from the 20 to 29 age-group. Table 3 shows the largest number of cases in 1998 occurred in the age 30 to 39 group (10 cases: 8 males and 2 females), followed by the 20 to 29 age group (9 cases: 6 males and 3 females).

The major risk factor for acquiring HIV has changed from men who have sex with men (MSM) in 1992 to injection drug use since 1997 (Table 4). In 1992, 40.0% of new HIV cases were attributed to MSM, 32.5% to

Figure 1: HIV Cases, By Sex, All Ages, Saskatchewan, 1989 - 1998



	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
—◆— Male	14	26	14	31	14	18	22	19	30	20
—■— Female	2	8	2	10	5	7	6	5	12	6
—— Total	16	34	16	41	19	25	28	24	42	26

Table 3: HIV Cases, By Age Group and Sex, Saskatchewan, 1998

Age Groups	Total	Sex		% of Total	
		Male	Female	Male	Female
Newborn	-	-	-	-	-
1-9	-	-	-	-	-
10-19	-	-	-	-	-
20-29	9	6	3	67%	33%
30-39	10	8	2	80%	20%
40-49	5	5	-	100%	0%
50 and over	2	1	1	50%	50%
TOTAL	26	20	6	77%	23%

heterosexual exposure, while 10.0% of cases reported injection drug use as the primary risk factor. In 1998, 46.2% of all new HIV cases had injection drug use as a risk factor compared to 23.1% with heterosexual exposure as a risk (Table 4). Only 19.2% of cases were men having sex with men as a behavioural risk factor for acquiring HIV.

The Prince Albert Seroprevalence Study (PASS) was carried out in Prince Albert, Saskatchewan in 1998 after a cluster of HIV cases surfaced (Siushansian, Vooght, Archibald, Young, Bangura, Hudson et al., 1999). The seroprevalence study determined rates of HIV, HCV, HBV and syphilis in a sample of 247 participants, 199 of whom were recently or currently injecting drugs,

Table 4: HIV Cases, Percentage by Self-Reported Risk Exposure, Saskatchewan, 1992-1998

	1992 %	1993 %	1994 %	1995 %	1996 %	1997 %	1998 %
Men Who Have Sex With Men	40.0	26.3	36.0	46.4	34.8	19.0	19.2
Injection Drug Use	10.0	26.3	12.0	28.6	30.4	42.9	46.2
Both MSM & IDU	2.5	10.5	4.0	0.0	8.7	9.5	3.3
Heterosexual Exposure	32.5	15.8	40.0	21.4	17.4	21.4	23.1
Recipient of Blood/Products	0.0	21.1	0.0	3.6	0.0	0.0	0.0
Other*	19.5	0.0	8.0	0.0	8.7	7.1	7.7

Other includes: vertical transmission, no identified risk, endemic area

Table 3: HIV Cases, By Age Group and Sex, Saskatchewan, 1998

Age Groups	Total	Sex		% of Total	
		Male	Female	Male	Female
Newborn	-	-	-	-	-
1-9	-	-	-	-	-
10-19	-	-	-	-	-
20-29	9	6	3	67%	33%
30-39	10	8	2	80%	20%
40-49	5	5	-	100%	0%
50 and over	2	1	1	50%	50%
TOTAL	26	20	6	77%	23%

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	%	%	%	%	%	%	%
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Injection Drug Use	10.0	26.3	12.0	28.6	30.4	42.9	46.2
Both MSM & IDU	2.5	10.5	4.0	0.0	8.7	9.5	3.3
Heterosaxual Exposure	32.5	15.8	40.0	21.4	17.4	21.4	23.1
Recipient of Blood/Products	0.0	21.1	0.0	3.6	0.0	0.0	0.0
Other*	19.5	0.0	8.0	0.0	8.7	7.1	7.7

Other includes: vertical transmission, no identified risk, endemic area and 48 of whom were sexual partners of persons using injection drugs. Results of the study showed that 49.5% of persons who use injection drugs tested positive for HCV. The two people who used injection drugs who tested positive for HIV already knew their status from previous testing. There were no new HIV cases diagnosed. This does not mean that only 0.8% of persons who use injection drugs in that area are HIV positive. It is most likely that persons who knew they were HIV positive did not participate in the study. Five cases (2.0%) had indicators of current or previous infection with hepatitis B. The PASS study includes risk factors and input on services for people living high-risk lifestyles (Siushansian et al.).

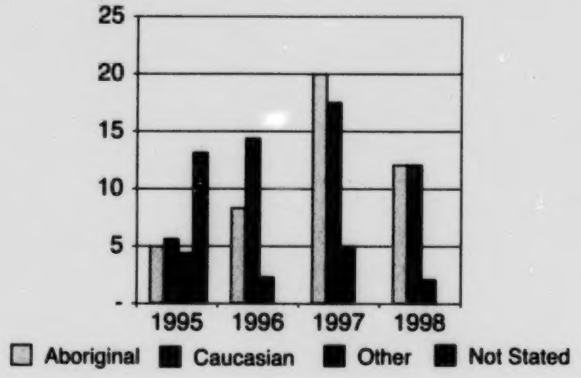
Regina Public Health Services partnered with Health Canada First Nations and Inuit Health Branch, and Saskatchewan Health in a study of people in Regina who use injection drugs. The seroprevalence study, which began in the spring of 2000, involved gathering information on risk factors, drugs of choice, attempts at treatment, etc. The interviews and testing were completed by the fall of 2000. Results of the analysis were released in the fall of 2001.

Saskatoon is one of seven Canadian cities that participated in a study of sexually transmitted infections (STIs) in street-involved youth. The participants were screened for STIs as well as various blood-borne pathogens. Results are not yet available at the time of printing this report.

Aboriginal HIV cases in Saskatchewan

The percentage of new cases of HIV infection in Saskatchewan among persons reporting to be Aboriginal has been increasing (Figure 2). In 1996, 33.0% of new cases reported being Aboriginal. In 1997, 48.0% of new cases and in 1998, 46.0% of new cases reported being Aboriginal. Much of the data prior to and including 1995 does not include ethnicity.

Figure 2: HIV Cases, by Ethnicity, Saskatchewan, 1995 -1998



Hepatitis C

In Saskatchewan, testing for hepatitis C (HCV) occurs in public health clinics, hospitals, STI clinics in major centres, and in physicians' offices and nursing stations throughout the province. Many people with chronic HCV infection may have acquired their infection years ago as a result of limited or occasional illegal drug injecting (U.S. Department of Health and Human Services, 1998).

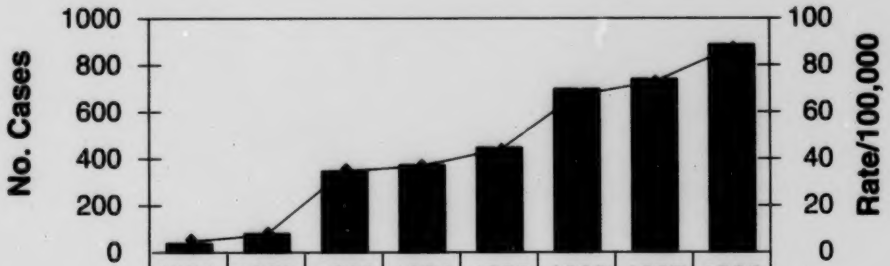
From 1991 to 1998, 3,679 cases of hepatitis C have been identified in Saskatchewan (Figure 3). The trend over the past five years shows an increase in the number of confirmed cases, from 399 in 1994 to 903 in 1998. These numbers do not represent people newly infected in a given year but rather the number of laboratory confirmed cases in a year. It is likely that a large number of cases reported annually were infected years ago. Therefore, it is not possible to determine the trend in new infections.

In 1998, 62.0% of cases were male, a proportion that remained relatively consistent over the 5-year period (Figure 4).

In 1998, the largest group of positive tests in males was in the 30 to 39 age-group, while the largest number of positive tests in females was in the 20 to 29 age-group closely followed by the 30 to 39 age-group (Figure 5). The majority of positive tests were in people who resided in the larger urban centres of Regina, Saskatoon and Prince Albert. It is not known how many people having risk factors for acquiring HCV are being tested.

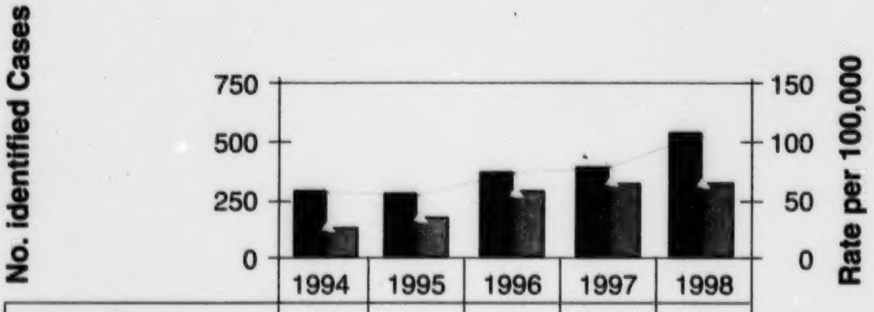
Injection drug use (IDU) is reported consistently as the most frequent risk exposure followed by a history of receiving blood or blood products (Figure 6). Exposure by reason of sexual orientation (MSM) is low among HCV infected people. Of those who tested positive for hepatitis C and were injecting drugs, many had several risk factors. Although sharing needles is the highest risk factor for acquiring HCV, some

Figure 3: Hepatitis C Cases, Incidence and Rates, Saskatchewan, 1991-1998



	1991	1992	1993	1994	1995	1996	1997	1998
■ Cases	25	74	346	399	463	702	767	903
—◆— Rate	2.47	7.28	34.0	39.4	45.3	68.3	75.2	87.6

Figure 4: Hepatitis C, Identified Cases and Incidence Rates by Sex, Saskatchewan, 1994 – 1998



	1994	1995	1996	1997	1998
■ Male	273	291	404	426	556
▨ Female	126	172	298	341	347
—×— Male rate	54.1	57.2	78.9	84.1	108.3
—▲— Female rate	24.7	33.5	57.7	66.3	66.8

studies show an association between exposures to multiple sexual contacts or one sexual contact with a history of hepatitis C, and acquiring HCV (U.S. Department of Health and Human Services, 1998). In contrast, spouses of patients with HCV have a low prevalence of HCV infection in the absence of other risk factors.

The Prince Albert Seroprevalence Study (Siushansian et al., 1999) showed that 49.5% of people using injection drugs who participated in the study were HCV positive, and 75.3 % of persons using injection drugs said they had borrowed used injecting equipment. Of the HCV positive persons, 9% had received blood or blood products prior to

Figure 5: Hepatitis C Cases, By Age Group and Sex, Saskatchewan, 1998

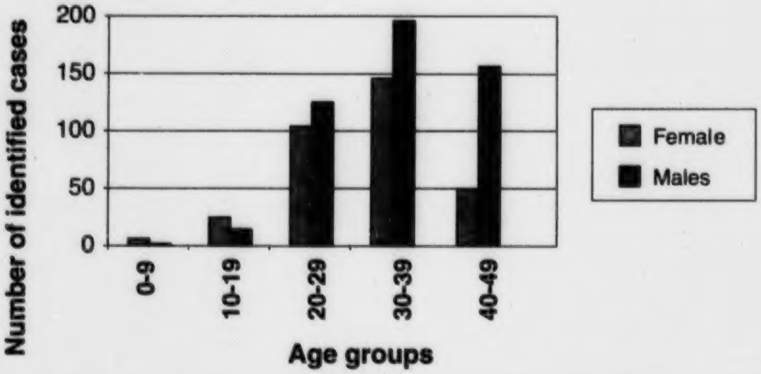
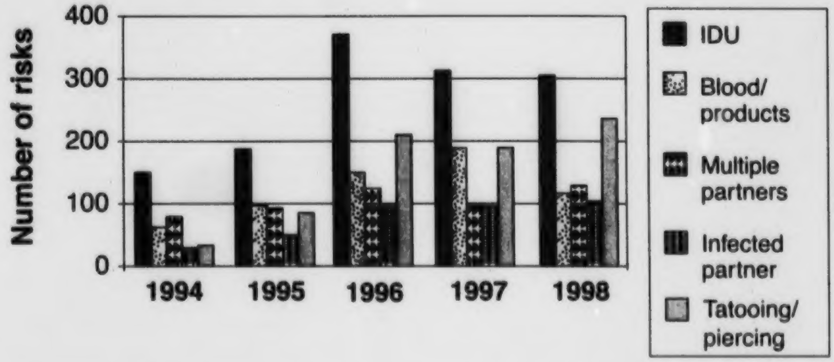


Figure 6: **Hepatitis C Cases, By Selected Self-reported Risk Exposures, Saskatchewan, 1994 - 1998**



1990, constituting an additional potential risk factor. The PASS study also included participants who were sexual partners of people who used injection drugs, and of these, 3% were HCV positive.

Table 5 shows self-disclosed risk factors. Some people only reported one risk factor and other contributing factors were not noted. In other cases, people disclosed three or four risk factors.

In 1998, 32.0% of HCV cases self-identified injection drug use as a risk factor (Table 5). Others may have had injection drug use as a risk factor but chose not to disclose it. Approximately 13.0% said they had received blood or blood products at some time in their lives. The province has had a blood recipient notification program for HIV since 1987 and for HCV since 1996 and has been able to screen blood for the hepatitis C virus since 1990. It is expected that since 1992, with virtually no risk of contracting HCV from blood products, the number of annual cases reporting this as a risk factor will decrease dramatically over the next few years. About 12.0% of cases disclosed their sexual partner was HCV positive or at risk for HCV, though they may or may not have used injection drugs themselves. As well, 15.0% of positive cases in 1998 stated they had multiple sexual partners (Table 5).

In 1998, 23.0% of those testing positive stated they had received tattoos, and less than 1.0% had body piercing or both tattoos and body piercing as contributing risk factors. As well, less than 1% of positive cases occurred as a result of vertical transmission from mother to baby, and less than 1.0% of cases disclosed hemophilia as a risk factor (Table 5). There are a number of cases where the risk factors were not determined, and were marked as 'N.I.R' (no identifiable risk factor).

Table 5: Hepatitis C Cases, Self-Reported Risk Exposures, Saskatchewan, 1994-1998

	1994		1995		1996		1997		1998	
	n	%	n	%	n	%	n	%	n	%
Risks stated	210	53%	280	60%	512	73%	498	65%	430	48%
No risk stated	189	47%	183	40%	190	27%	269	35%	473	52%
Total Cases	399	100%	463	100%	702	100%	767	100%	903	100%
Self-reported risk exposures as % of total risks reported										
IDU	146	70%	187	67%	374	73%	319	64%	306	71%
Blood Product	63	30%	96	34%	151	29%	186	37%	124	29%
Multiple partners	80	38%	90	32%	128	25%	101	20%	143	33%
Infected partner	33	15%	50	18%	94	18%	96	19%	107	25%
Endemic	9	4%	9	3%	14	3%	10	2%	19	4%
Same sex	11	5%	5	2%	12	2%	18	4%	17	4%
Perinatal	2	1%	5	2%	6	1%	5	1%	2	0%
Hemophiliac	2	1%	3	1%	3	1%	1	0%	2	0%
NIR	11	5%	5	2%	28	5%	28	6%	26	6%
Tattoo/Pierce	35	17%	83	30%	210	41%	187	38%	238	55%

(N.I.R. = no identifiable risk factor)
Percentages may add to greater than 100% because a client may state more than one risk exposure.

Table 6: Hepatitis C Cases, Percentage by Injection Drug Use and Related Risk Exposures, Saskatchewan, 1994 - 1998

	Percentage by Injection Drug Use Reporting with							
	All reported risk exposures	**Multiple sexual partners**	**Infected partners**	**Blood recipient**	**Blood recipient & multiple sexual partners**	**Multiple sexual & infected partners**	**Tattooing**	**Tattooing & multiple sexual partners**
1994	70	41	23	42	10	10	23	14
1995	67	43	21	19	7	11	18	16
1996	73	29	20	22	5	6	42	15
1997	64	26	23	23	7	6	40	13
1998	71	38	28	21	8	11	54	24

A detailed breakdown of the risk exposures that have been self-disclosed by persons who used injection drugs and who had hepatitis C, shows additional possible exposures to the hepatitis C virus (Table 6). The highest percentage also had body piercing or tattooing, both invasive procedures involving needles. Though sexual contact is not considered a high risk for hepatitis C transmission, a high percentage of persons who use injection drugs also reported having multiple sexual partners or an infected sexual partner. These risks may be associated more with lifestyle practices of persons who use injection drugs than dual risk of transmission. Just over one-fifth of newly diagnosed persons who used injection drugs in 1998 also reported having received blood or blood products.

Hepatitis C and Aboriginal people

Saskatchewan only distinguishes between 'Registered Indian' or 'other' in documenting ethnicity for newly diagnosed cases of hepatitis C. There is not a category available to identify other cases as being Aboriginal. In both 1997 and in 1998 about 23.0% of new HCV cases were documented as 'Registered Indians' (Table 7) compared to the 12.0% of Registered Indians in the province (Saskatchewan Health, 1999).

Table 5: Hepatitis C Cases, Self-Reported Risk Exposures, Saskatchewan, 1994-1998

	1994		1995		1996		1997		1998	
	n	%	n	%	n	%	n	%	n	%
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Infected partner	33	15%	50	18%	94	18%	96	19%	107	25%
Endemic	9	4%	9	3%	14	3%	10	2%	19	4%
Same sex	11	5%	5	2%	12	2%	18	4%	17	4%
Perinatal	2	1%	5	2%	6	1%	5	1%	2	0%
Hemophiliac	2	1%	3	1%	3	1%	1	0%	2	0%
NIR	11	5%	5	2%	28	5%	28	6%	26	6%
Tattoo/Pierce	35	17%	83	30%	210	41%	187	38%	238	55%

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1994	70	41	23	42	10	10	23	14
1995	67	43	21	19	7	11	18	16
1996	73	29	20	22	5	6	42	15
1997	64	26	23	23	7	6	40	13
1998	71	38	28	21	8	11	54	24

A detailed breakdown of the risk exposures that have been self-disclosed by persons who used injection drugs and who had hepatitis C, shows additional possible exposures to the hepatitis C virus (Table 6). The highest percentage also had body piercing or tattooing, both invasive procedures involving needles. Though sexual contact is not considered a high risk for hepatitis C transmission, a high percentage of persons who use injection drugs also reported having multiple sexual partners or an infected sexual partner. These risks may be associated more with lifestyle practices of persons who use injection drugs than dual risk of transmission. Just over one-fifth of newly diagnosed persons who used injection drugs in 1998 also reported having received blood or blood products.

Hepatitis C and Aboriginal people

Saskatchewan only distinguishes between 'Registered Indian' or 'other' in documenting ethnicity for newly diagnosed cases of hepatitis C. There is not a category available to identify other cases as being Aboriginal. In both 1997 and in 1998 about 23.0% of new HCV cases were documented as 'Registered Indians' (Table 7) compared to the 12.0% of Registered Indians in the province (Saskatchewan Health, 1999).

Table 7: Hepatitis C Cases, By Ethnicity and Sex, Saskatchewan, 1995-1998

	1995			1996			1997			1998		
	T	M	F	T	M	F	T	M	F	T	M	F
Registered Indian	68	28	40	160	68	92	178	73	105	212	104	108
Other	560	365	195	542	336	206	589	353	236	687	452	235
Total	**628**	**393**	**235**	**702**	**404**	**298**	**767**	**426**	**341**	**899**	**556**	**343**

T = Total cases M = Male F = Female

Hepatitis B

Hepatitis B (HBV) reports in Saskatchewan showed between 21 and 57 new cases per year between 1994 and 1998. In 1998, 57 new cases were reported (Table 8).

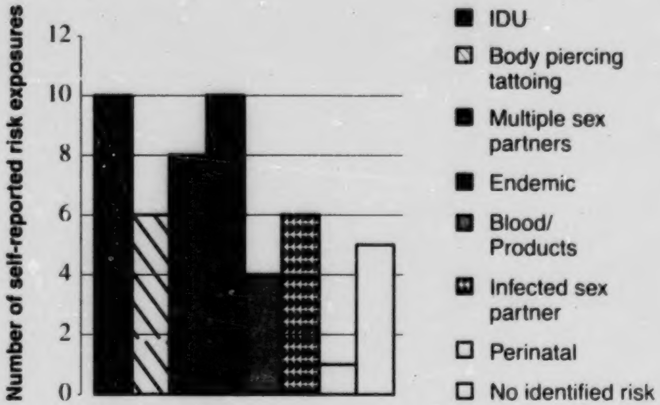
Risk factors could not be determined for recently reported hepatitis B cases, but among those that could be determined, 10 of the 57 newly reported cases in 1998 were attributed to injection drug use (Figure 7).

Table 8: Hepatitis B Cases, Both Sexes Combined, All Ages, Saskatchewan, 1994 - 1998

Number of reported cases per year					
Year	**1994**	**1995**	**1996**	**1997**	**1998**
No. of cases	25	21	51	33	57

Source: Health Canada, 1999

Figure 7: Hepatitis B Cases, by Self-reported Risk Exposures, Saskatchewan, 1998



Although Figure 6 shows the division of risk factors for incident cases in 1998, some respondents reported multiple risk factors, which may account for their hepatitis B status.

Ethnicity for hepatitis B reporting is documented as 'Registered Indian' and 'Other'. Any Aboriginal person who is not a registered Indian appears in the 'Other' category. There were 15.0% of newly diagnosed HBV cases among Registered Indians in 1997, and in 1998, 13.0% of newly diagnosed HBV cases were among Registered Indians (Table 9).

Table 9: Hepatitis B Cases, By Ethnicity and Sex, Saskatchewan, 1995-1998

	1995			1996			1997			1998		
	T	M	F	T	M	F	T	M	F	T	M	F
Registered Indian	0	0	0	8	3	5	5	3	2	7	4	3
Other	21	10	11	43	26	17	28	10	18	47	22	25
Total	**21**	**10**	**11**	**51**	**29**	**22**	**33**	**13**	**20**	**54**	**26**	**28**

T = Total cases M = Male F = Female

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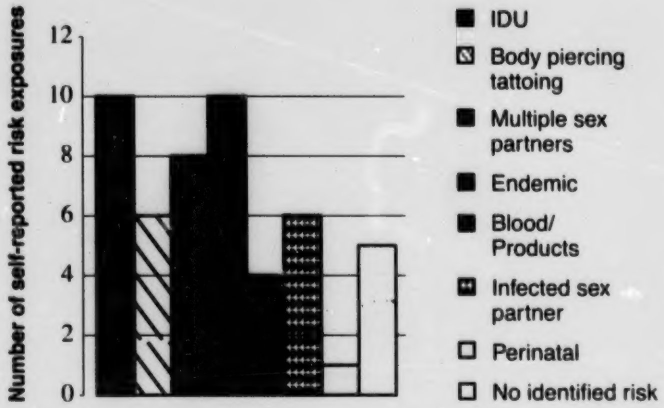

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1.4 Injection Drug Use

1.4.1 Changing public perception: Harm reduction as a public health measure

Injecting drugs is a symptom of broader social problems. Addressing the root causes of harmful substance use requires measures to address problems including child abuse, poverty, family dysfunction, parental substance dependence, unemployment, low literacy, discrimination, low levels of self esteem and inadequate housing.

People who use injection drugs are often viewed as criminals and derelicts rather than persons with legitimate chronic health problems. Substance dependence is a clinically recognized chronic disorder involving genetic, psychosocial, and environmental factors.

Research shows there are actual changes in brain physiology associated with drug dependence (No Further Harm. TASC Report on Narcotics Harm Reduction 1997). Substance dependence is defined in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, [DSM IV] (1999) as one of the substance-related disorders. It is a maladaptive pattern of substance use leading to clinically significant impairment or distress. Substance dependence is manifested by one or more of the following: recurrent use despite failure to fulfill obligations, using in situations where it is physically hazardous, using despite recurrent legal problems, and compulsive use despite the harm caused.

For chronic conditions including injection drug use, there is a need for long-term care, treatment and client cooperation. Most people who inject drugs regularly are marginalized people with social, physical and psychological problems that make it difficult for them to comply with most existing treatment regimes. Lack of societal support, unemployment, low income, homelessness and conflict with the law makes compliance with treatment difficult.

Although persons who use injection drugs have chronic medical conditions, their situation is made worse by the fact that some of the drugs they use are illegal and expensive. Criminal activity is almost always a part of their daily lives, as they scramble to procure enough money for their next fix. They often spend their lives moving in and out of jails. Some have accompanying mental disorders that complicate their lives even more (Millar, 1998).

Recommendations

3. **That all agencies that deal with persons who use injection drugs should review their policies to reflect that addiction to injection drugs is first and foremost a health and social issue.**

1.4.2 Services and initiatives as of 2000

Needle exchange

It is not known how many people in Saskatchewan use injection drugs, but urban service providers estimate there are about 3,500 to 4,000. Within the past few years, services have expanded to include needle exchange programs (NEPs) in Regina, Saskatoon and Prince Albert. Clientele using the services are often transient and drop in on an irregular basis. Many clients use NEPs as they move between urban and rural areas and there is a large turnover due to residential instability, incarceration or admittance to a methadone program. Services for offenders who use injection drugs are covered in Section 2.5.

In 2000, the Street Outreach/Needle Exchange Program in Saskatoon had about 500 registered clients. More than half of the clients are women. Many clients provide secondary distribution of clean syringes to others that use injection drugs. The Street Outreach Program has a van and a fixed site for distribution of needles and sharp containers and collection of used needles. Nurses and outreach workers provide screening for hepatitis B and C in addition to anonymous HIV testing in the van, in homes, and at the fixed site. The program makes referrals, provides health education, distributes condoms and provides influenza, pneumococcal, hepatitis A and B immunizations free of charge to their clients.

Regina's Needle Exchange Program (The Street Project) offers clean needles, condoms, sharps containers, bleach kits, referrals to anonymous testing, referrals to addiction treatment, referrals for free hepatitis B immunizations and other medical services. The Street Project operates from a van circulating through target areas of Regina meeting people who need to exchange their needles. The van also goes to a community outreach location (Carmichael Outreach) one afternoon per week where a nurse exchanges needles, gives health information, and makes referrals. There is also a fixed site (STI clinic) where needles can be obtained Monday through Friday and Saturday afternoons. In 1999, there were 430 regular clients in the program. AIDS Regina also operates a needle exchange and provides syringes to Carmichael Outreach for needle exchange.

Prince Albert has had a needle exchange program since September 1994. It operates out of the Prince Albert STD clinic and has a satellite service through a downtown pharmacy. The Prince Albert programs had a total of 509 clients registered, with an equal number of males and females. Between January of 1998 and June of 1999, there were 265 clients participating in the needle exchange program.

As mentioned, there is an estimated 3,500 to 4,000 individuals who use injection drugs in the province. Regular injectors use an average of three to five needles per day. In 1999, the number of needles distributed provincially was approximately 600,000. These numbers indicate that the average person misusing injection drugs will reuse needles. Some pharmacies sell syringes in singles, small packages, or a supply of one hundred syringes, while other pharmacies do not sell syringes to persons who use injection drugs. The Canadian HIV/AIDS Legal Network (1999) emphasizes the important role of pharmacies in facilitating needle availability, noting that for some communities it may be the only local source of sterile injecting equipment.

Drug recovery programs

Working in co-ordination with other community services, a continuum of alcohol and drug services, including detoxification, outpatient treatment, inpatient treatment, and long-term residential services are currently available to all Saskatchewan residents, and their families, who are affected by alcohol and drugs.

Recovery programs in the province available to people who use injection drugs occur in the same milieu as treatment for people whom misuse alcohol and other drugs. Between the thirty-two health districts, one health authority, the St Louis Alcoholism Rehabilitation Centre and the Métis Addiction Council of Saskatchewan, Inc. (MACSI), there are 45 alcohol and drug outpatient centres, six detoxification centres (75 beds), nine inpatient treatment centres (164 beds) and two long-term residential recovery centres (21 beds).

Qualified alcohol and drug professionals conduct assessments and appropriate treatment planning at the community level. Referrals and adjunct services are then determined and arranged according to individual need.

Outpatient services

Outpatient services offer support and services to chemically dependent persons and their families within the community. Services range from counselling and rehabilitation, to screening, assessment and referral, education, early intervention and community prevention activities. Outpatient services make up the majority of alcohol and drug services in Saskatchewan. Community-based organizations provide outpatient programming as well. MACSI provides outpatient services in Prince Albert and Regina. Complementing MACSI outpatient services is a network of field educators who operate throughout the province, providing outpatient services in Fort Qu'Appelle, Yorkton, Archwill, North Battleford, Green Lake and Cumberland House. The National Native Alcohol and Drug Abuse Program (NNADAP) offered through the Medical Services Branch of Health Canada operates two additional outpatient centres and provides services to First Nations throughout Saskatchewan.

Detoxification (withdrawal management) services

Detoxification, the process of ridding the body of harmful chemicals, is usually the first step in the recovery process. There are two main types of detoxification treatment - medical detoxification and non-medical, or social detoxification.

Medical detoxification is provided in circumstances where the client demonstrates severe withdrawal symptoms and occurs under the supervision and management of a physician, usually within a hospital or similar medical facility. In some circumstances severely debilitated clients may be stabilized using drug therapy.

Non-medical or social detoxification provides a short-term, safe and supportive environment for people withdrawing from alcohol and other drugs, as well as linkages to community resources for assessment, referral and possible pre-treatment services. It is also possible for people to detox in their homes with professional and/or peer support.

Inpatient treatment services

Inpatient treatment offers chemically dependent persons and their families an intensive recovery program, typically four weeks in duration. These programs are geared toward people requiring intensive support and education.

Saskatchewan Health operates nine inpatient centres, three of which are administered through MACSI. Calder Centre in Saskatoon has facilities for adults and youth. Other than the Sturgeon Lake White Buffalo Treatment Centre and Eagle Path Inhalant Abuse Centre (operated through federal programs), Calder Youth Program is the only treatment centre offering a residential four-week program for youth in the province. Individuals who are stabilized on methadone may participate in the adult program at Calder Centre. Other inpatient treatment centres in the province do not provide services to individuals participating in a methadone maintenance program, except MACSI Prince Albert.

NNADAP operates six inpatient treatment centres located throughout the province.

Long-term residential facilities

Saskatchewan's two long-term residential facilities provide services for recovering chemically dependent persons. Residences offer a supportive environment, as well as life-skills training, which allows clients to further enhance the skills needed for recovery.

Numbers of persons who have used injection drugs entering recovery programs in Saskatchewan

Between 1996/97 and 1999/00 Saskatchewan Health statistics report increased numbers of persons who use injection drugs utilizing Alcohol and Drug Services (Saskatchewan Health, 2000).

In 1996/97 there were 1,934 people entering recovery programs who indicated they had injected drugs. Six hundred and seventy had injected illicit drugs in the previous year, 633 had used injection drugs prior to the previous 12 months, and 631 stated they had injected drugs both during the previous 12 months and earlier.

In 1997/98 there were 2,310 people entering recovery programs who indicated they had injected drugs. Seven hundred and sixty had injected illicit drugs in the previous year, 727 had used injection drugs prior to the previous 12 months, and 823 stated they had injected drugs both during the previous 12 months and earlier.

In 1999/00 there were 2,070 people entering recovery programs who indicated they had injected drugs. Eight hundred and fifty-seven had injected illicit drugs in the previous year, 603 had used injection drugs prior to the previous 12 months, and 610 stated they had injected drugs both during the previous 12 months and earlier. Data for 1998/99 is not available.

In 1999/00, seventy-three percent of persons who accessed recovery treatment for injection drug use resided in the major urban centres of Regina (30%), Saskatoon (37%), and Prince Albert (6%). The number of people entering recovery programs represents only a portion of all those using injection drugs in Saskatchewan, because many do not access treatment services.

Information from the Prince Albert Seroprevalence Study (PASS) study in Prince Albert Saskatchewan (Dr. Mark Vooght, unpublished data, 1999) shows there were 104 persons who had received treatment for drugs and/or alcohol in the previous 12 months. The PASS study showed that for these 104 individuals, the most common withdrawal management and treatment modalities were inpatient facilities (29), outpatient or alcohol rehabilitation centres (24), and inpatient detoxification facilities (21) (Siushansian et al., 1999).

Saskatchewan Alcohol and Drug Agency Services statistics reported in 1998/1999 that 1,795 people had used alcohol and drug treatment services that claimed injecting a specific drug most frequently in the past year. Six hundred and eighty-six out of 1,795, 35% reported injecting Talwin and Ritalin most frequently. There were 589, 30% who claimed injecting morphine or Demerol most frequently; while 397, 20% stated their most frequently injected drug was cocaine. One hundred and twenty-three, 6% claimed heroin as the drug usually injected (Saskatchewan Health, 1999a).

Data collected from Prince Albert (Siushansian et al., 1999) found that the drugs most commonly injected in the six months before the study were Dilaudid (71%), Ritalin (70%), and morphine (49%), with a smaller number having injected cocaine (29%) and heroin (4%). The most common drug used by men was Dilaudid (52%) and by women - Ritalin (41%).

Methadone programs

The number of physicians licensed to prescribe methadone to opiate-dependent persons in Saskatchewan has increased from six doctors in 1997 to 17 doctors as of June 2000. Doctors are located in Maple Creek, Fort Qu'Appelle, Moose Jaw, Saskatoon, Regina, Lloydminster, Yorkton and Prince Albert. The number of patients receiving methadone increased from 20 in 1996 to 550 in June of 2000 (Saskatchewan Health, 2000).

Physician office-based programs are in all cities mentioned above with three additional clinic-based programs in Regina. These are the South Saskatchewan Harm Reduction Initiative, Inc., the Parliament Methadone Program, and the Regina Health District Alcohol and Drug Services Program. In Prince Albert, Maple Creek, Regina and Saskatoon, the programs reach into correctional centres and federal penitentiaries.

Community programs

There are several community programs to prevent harm among persons who use injection drugs and to prevent injection drug use in high-risk persons. The following section describes some of these community programs.

The *EGADZ* program in Saskatoon assists at-risk, street-involved youth to participate in educational and recreational activities or allows them to just hang out in the downtown centre. *EGADZ* street outreach van is out four days a week and distributes condoms and food to young people who work on the streets, offering them support and assistance.

My Home program is a pilot project partnered by Saskatoon District Health, Social Services, and *EGADZ*. The project is a safe house for three girls (ages 16 to 17) who want to get away from street life. The young people live in a house with mentors and have access to addiction, educational and vocational services.

Another Saskatoon project is a safe house for street-involved youth who are less than 16 years. The safe house has space for five youths. Saskatoon District Health, Social Services, and Saskatchewan Justice fund the project. *Youth Circles* is a Saskatoon program that works with at-risk youth in trouble with the law. Sponsored by the

Saskatoon Tribal Council, *Youth Circles* is a voluntary alternative measures program that uses a holistic approach to help at-risk youth. An example of the innovative program offered is the canoe trips for youth. The 4-day canoe trips are examples of a program that diverts youth from being incarcerated, providing positive role models and celebrating Aboriginal culture. The youth come from families who are poor, dysfunctional, whose relatives have come in contact with the justice system, and who lack role models to follow. The canoe trip on the Churchill River includes 12 to 17 at-risk youth accompanied by police officers from Saskatoon, elders, and young successful Aboriginal people who serve as role models. The canoe trips are successful in breaking down barriers between police and youth.

The Margo Fournier Centre in Prince Albert offers recreation, support and a drop-in place for at-risk young people. Services include counselling, recreation, and assistance in getting back to school. Diversion programs for prostitution offenders *(John Schools)* have been offered in Regina and Prince Albert for men charged with soliciting prostitutes. The men in these diversion programs are forced to examine the health risks they take when using the services of prostitutes. A new diversion program for sex trade workers called the *Springboard Program* began in Prince Albert in late 1999. The program facilitator works with sex trade workers to discuss the health risks as a result of working in the sex trade and to explore alternatives.

The STI clinic staff in Prince Albert also provides co-ordinated services to over a dozen individuals who have HIV/AIDS. Some are in the process of making the transition from accepting their diagnosis to living with HIV. Others are returning home to small communities where they fear discrimination, worry about lack of support and necessary services. The clients experience many emotional and physical challenges. STI staff provide support regarding medical issues, crisis intervention, counselling, travel to specialists, referrals to agencies and other services to clients and their families.

In southern Saskatchewan there are numerous summer camps for at-risk youth initiated through Tribal Councils and Métis Nation Locals. These include outdoor activities and cultural teachings.

In addition to the various services to children, youth, and families, Saskatchewan Social Services also provides funding to community-based organizations for services to address the sexual exploitation of children and youth, to help families that are at high-risk for drug use, and to help families in crisis. Financial benefits also available to social assistance clients who are HIV positive include an allowance for special diets and other special needs in addition to travel costs for medical appointments.

In 1999, Saskatchewan Social Services launched a five-point strategy to combat sexually exploited children and youth through prostitution. [Since the writing of this report, Saskatchewan Social Services has taken significant steps to address the issue of children and youth who are sexually exploited through the sex trade. New initiatives are contained in the government's response to the 49 recommendations contained in the report of the Special Committee to Prevent the Abuse and Exploitation of Children through the Sex Trade.]

The 1999 strategy included:

- a public information campaign targeting individuals who exploit children and youth which emphasizes that child prostitution is child abuse;
- targeted outreach services for children and youth who are sexually exploited through prostitution;
- review of existing Provincial and Federal Laws and amendments to the Child and Family Services Act (1999), to better protect victims of child abuse and increase penalties for offenders;
- strict law enforcement aimed at offenders, to ensure that children and youth involved in prostitution receive the same protection and services as other victims of child abuse, and that sexual offense charges be considered for men who abuse children in addition to prostitution offenses;
- the creation of a tracking and monitoring system of victims and offenders.

AIDS Program South Saskatchewan (formerly AIDS Regina) and All Nations Hope AIDS Network provide prevention, education and outreach services to people who use injection drugs. Needle exchange is available through the office, through outreach in the early hours of the morning, and through Carmicheal Outreach (a community program that provides many basic needs for people with economic difficulties). All Nations Hope AIDS Network has employed education and outreach workers in various cities across the province.

AIDS Program South Saskatchewan and *AIDS Saskatoon* also develop and deliver education and advocacy initiatives in their communities. Educational services involve outreach and educational events to schools, young offenders, health service providers and the general public, as well as peer AIDS education training for interested groups.

In Regina, the *Street Workers Advocacy Project (SWAP)* has a fixed site and a van to provide services to both males and females involved in the sex trade. Services include social and educational opportunities, a place to drop in and have coffee, or to get free condoms and 'bad date' sheets that advises them of dangerous Johns.

Rainbow Youth Centre in Regina provides services to at-risk youth. Its services include a drop-in centre, crime prevention through community liaison, recreation, outreach services, drama and other creative activities, life-skills for adolescents, anger management courses, job preparation courses, peer helpers, and social activities.

The Four Directions Health Centre in Regina provides prevention, educational and counselling to at-risk persons. Their programs include the Sunrise Health Program (presentations on HIV/AIDS to the Mètis Addiction Council of Saskatchewan, Inc., schools, and community). Healthiest Babies Possible (prenatal classes and counselling to parents), and a Community Development Program.

'Mom's Support Circle' at the *Four Directions Health Centre* is a program for any women with problems in their lives including many women who inject drugs. Every week between 5 and 15 women form a speaking circle and discuss issues and problems they face. People who use injection drugs do not have to abstain to attend. Together with non-injection drug using women, they come together to unwind, socialize, make friends, receive and give support.

Youth Unlimited is another organization for at-risk youth in Regina and provides services, such as organized sports (e.g., hockey teams) and social activities.

FOUNDATIONS OF A PROVINCIAL ACTION PLAN

2.1 Outreach Services and Education

2.2 Social Determinants of Health and Injection Drug Use

2.3 Public Health and Treatment

2.4 Cost Effective Strategies

2.5 Legal Policies and Law Enforcement

2.1 Outreach Services and Education

2.1.1 Education and outreach for persons using injection drugs

Outreach

Outreach services for persons using injection drugs are essential in order to reach people who are normally not in contact with mainstream health services (Broadhead, Heckathorn, Weakliem, et al., 1998; Latkin, 1998; Neaigus, 1998; Neaigus et al., 1993; Rhodes et al., 1998). There have been numerous studies looking at the best ways to approach outreach work (Broadhead et al.; Latkin; Neaigus; Neaigus et al.). Programs in Britain demonstrated success by employing ex-users as outreach workers. These workers have been accepted by the at-risk populations in large urban centres and are able to provide condoms, clean needles, education and referrals to a hard to reach group (Rhodes, Holland & Hartnoll, 1991).

Personal networks

Interventions within personal social networks have proven useful in reducing harms (Des Jarlais & Friedman, 1990; Latkin, 1998; Neiagus, 1998) since risk behaviours for acquiring blood-borne pathogens among persons using injection drugs are influenced by social factors. HIV risk behaviours of friends and attitudes about needle sharing are the strongest predictors of behavioural change. These are stronger predictors than knowledge about HIV/AIDS, or knowing someone with HIV/AIDS or the level of education completed (Latkin, 1998). The most important element for quitting injection drug use was having a smaller proportion of people who inject drugs among one's friends and acquaintances (Latkin, Knowlton, Hoover, & Mandell, 1999).

Personal networks as a target group for interventions have used group sessions and focus groups to institute group norms that encourage prevention of blood-borne pathogens. Personal network interventions can also use prominent people or 'opinion leaders' to influence others in the network to adopt safer practices or behaviours. The instability of many drug-using networks makes it difficult to use network interventions that require close relationships among members. In these cases, opinion leaders and social organizing techniques may be used. Comparisons of personal network interventions to controls show greater sexual risk reductions in network interventions and the effective use of peer or 'opinion leaders' in interventions for behaviour change (Neaigus, 1998).

Network-based interventions provide sustainable risk reduction and may be used to compliment individualized counselling for individuals with a prior history of sexual abuse or psychological problems. The use of a network approach is also cost-effective since large numbers of people using injection drugs can be reached. For peer outreach workers to be successful, strong institutional and personal supports are essential.

Peer leaders

An American study examined the effectiveness of using peer leaders with persons who use injection drugs to prevent the spread of blood-borne pathogens. The study determined that leaders respected by persons using injection drugs influenced behaviour of their injecting peers (Neaigus, 1998). These leaders might be bartenders at gay bars, secondary syringe distributors, or others who occupy central roles. Preventive measures such as regularly using condoms and properly cleaning needles with bleach were reinforced to the leaders during a 10-session training program. There were no needle exchanges in the area at the time. When friends and contacts of the leaders were interviewed, they were also found to be practicing safer behaviours, and over half of these people said that they had learned the behaviours from the leaders (Latkin, 1998).

The peer driven intervention model uses a combination of monetary and altruistic incentives to encourage people who currently inject drugs to recruit and educate other persons who use injection drugs about blood-borne pathogens risk reduction. Individuals recruited are able to become advocates and educators. Through these linkages harm reduction education can reach a large number of persons who use injection drugs.

Counselling

Counselling sessions between couples were found to be effective when information was provided on avoiding the spread of blood-borne pathogens from one to another. Social gatherings with other couples in the intervention also proved useful in changing risky behaviours (Neaigus, 1998).

Education and outreach with persons using injection drugs should encourage appropriate syringe disposal. In various programs, people who use injection drugs have improved disposal practices by being reminded that syringes dropped in parks and alleys can put Needle exchange programs in jeopardy (Wodak & Des Jarlais, 1993).

Recommendations

In the area of education and outreach for persons who use injection drugs it is recommended:

4. **That peer outreach programs be created or strengthened to reach persons who use injection drugs and their partners.**

5. **That support be provided for grassroots initiatives and creative interventions. These might include peer-directed groups for persons who use injection drugs, safe houses, alternative housing and drop-in centres.**

2.1.2 Youth and risk behaviours

Young persons who use injection drugs are at high risk for acquiring blood-borne pathogens. There are important differences between young and older people who use injection drugs as outlined in international and Canadian research. A study in the Netherlands (Fennema, Ameijden, Van der Hoek, & Coutinho, 1997) shows that when people first begin injecting they are at higher risk for HIV seroconversion. Borrowing syringes is common in younger people in this study.

An Australian study (Loxely, Marsh, & Lo, 1991) shows that young persons who use injection drugs are less likely to change their substance-taking behaviour because of AIDS, and are less likely to use injection drugs alone.

Street youth are at very high risk of acquiring HIV and other blood-borne pathogens. In Montreal, researchers found that the following factors were associated with HIV infection in street youth: being over 20 years of age, having injected drugs, having engaged in male prostitution, having had a sexual partner with HIV, and being born in a foreign country. A high proportion of street youth used injection drugs (36%), with girls beginning to inject at an earlier age than boys. Over half of those who had injected had shared needles and 67% had shared other injecting equipment. Forty-three percent of youth in the study had injected themselves more than 100 times. Out of 919 participants in the study, 14 boys and 3 girls between the ages of 13 and 25 tested positive for HIV, resulting in a prevalence rate of 1.85%, which is four times higher than the rate of the general population for Montreal (Roy et al., 1995). These disturbing results prompted a prospective cohort study of Montreal street youth in 1996 that is still in progress when this report was drafted.

Overall, youth have more contact with illicit drugs than they did in the past. Fishman, Burner, & Adger (1997) shows an increase in rates of alcohol and drug use, in addition to a lowering in the age of first time drug use in American schools. The proportion of eighth graders using alcohol or illicit drugs nearly doubled from 1991 to 1995 (11% to 21%). The average age of first time use of alcohol or other drugs is 12 to 14 years.

The PASS study shows that the median age for persons who use injection drugs to begin non-injection drug use was 14, with the largest proportion beginning to use drugs (non-injection) between the ages of 10 to 14 years. The median age for beginning injection drugs among participants in the study was 19 years for both males and females. The largest proportion of study participants began injecting between the ages of 15 and 19 years (Siushansian et al, 1999).

Teenagers are prone to risky activities. Youth are often poly-drug users who use an average of three to four substances (Fishman, Burner, & Adger, 1997). Leading causes of death in American teenagers is unintended injuries, homicide, and suicide. Alcohol and drugs are involved in 50% of fatal motor vehicle accidents and a significant proportion of suicides. Fewer than half of youths interviewed in a dropout prevention program used a condom the last time they had intercourse (O'Hara, Parris, Fichtner, & Oster, 1998).

Prevention and education for youth

The same type of network and peer driven approaches that work for adults are effective in youth education and prevention initiatives (Broadhead et al., 1998; Latkin, 1998; Neiagus, 1998; Neiagus et al., 1993). Role models respected by youth, and with meaningful messages for youth, have been used in Saskatchewan as seminar leaders for those at-risk. Outreach programs that can reach at-risk youth and work to change behaviours within the peer group by combining network, peer-driven and individual approaches are essential.

Schools share responsibility with parents and community organizations to teach young people about prevention. Saskatchewan Education has prepared health education modules on HIV/AIDS and blood-borne pathogens for instruction in Grades 6 to 9 health classes (Saskatchewan Education, 1998). Because many at-risk youth come from dysfunctional social environments, have various psychological problems and are more likely to drop out of school, accessible counselling services are needed.

Many at-risk youth are already involved with the justice system and are essentially a 'captive audience' when they are in young offender residential programs. At this time there is an opportunity for enhanced education and follow-up with young persons who use injection drugs and for those at risk of initiating injecting behaviour. Education should be provided through a variety of methods including appropriate peer or 'role model' speakers, group interventions and individual counselling. Since many young offenders are of Aboriginal descent, Aboriginal role models or Elders could be incorporated into the educational programs. Information on, and encouragement for, blood-borne pathogen testing and hepatitis B immunization are important parts of the educational process. It is essential that young people involved with the justice system learn about community-based resources, support and harm reduction initiatives, and be encouraged to access them once they are out of the correctional facility.

Recommendations

6. **That all levels of government and community-based agencies collaborate to ensure a continuum of service options to address the diverse needs of children and youth. These should include:**

a) **age appropriate treatment programs for youth (17 and under) and young adults (18 to 25 years);**

b) **prevention programs for high-risk youth and children;**

c) **crisis intervention services for youth and children.**

For young offenders and young offender staff it is recommended:

7. **That a core education and treatment program on issues related to self-esteem, abuse, addictions, sexually transmitted infections, blood-borne pathogens and harm reduction be offered to young offenders in each level of custody. At-risk youth would have input into the development of such programs;**

8. **That the unique issues faced by Aboriginal youth must be identified and reflected in programming;**

9. **That anonymous HIV testing with pre- and post-test counselling be available;**

10. **That suitable latex and non-latex condoms including lubricant and appropriate education be made available to young offenders in a discrete manner.**

2.1.3 Education for health care workers

It is important that health care workers who are working with persons who use injection drugs be knowledgeable on various aspects of addiction medicine. Most people who inject drugs are in contact with the health system through visits to emergency room and other services. Therefore, nurses, pharmacists, psychologists, social workers, community workers and physicians need continuing education about the prevention, screening, assessment and management of substance dependence and injection drug use. Education on preventing the spread of infection needs to be ongoing, ranging from Standard Precautions to information on methadone maintenance. Addiction medicine is not a field in which many physicians choose to work. A study of Scottish methadone programs outlines how a government sponsored agency recruited physicians to work with methadone clients, and provided support to physicians and liaison for clients to psychiatric and other services (Weinrich & Stuart, 2000).

There is much discrimination against persons who use injection drugs. Education of health care workers needs to emphasize that drug dependency is first and foremost a health and social issue. Health personnel and community agencies can work with drug-dependent people to reduce the harms associated with drug use while they are actively using drugs or trying to quit. Educational initiatives involving community agencies and organizations can be established to share new information, conduct research, brainstorm solutions to problems in service delivery, and plan the next collaborative steps in education, prevention, and services. The Prince Albert Health District is using this type of model.

Many physicians have not had an opportunity to study addictions medicine because it comprises only a small part of medical school and primary care residency curricula (Gelula, 1997). Alcohol and drug dependence is one of the most common disorders seen in medical practice. A wide range of medical problems associated with addictions includes pancreatitis, liver disease, accidents, suicide and depression (Klamen & Miller, 1997). Faculty development can integrate addiction medicine into medical curricula so that all physicians can be better informed. Recommendations from the National Advisory Committee on AIDS encourages physicians to be trained and involved in providing care and advice to those who use injection drugs (1993).

Recommendations

There is a need for the education of involved agencies, outreach workers and persons who use injection drugs in the prevention of injection drug use and in the harm reduction philosophy. It is recommended:

11. **That Saskatchewan Health, in consultation with the departments of Social Services, Education, and Justice, and involved agencies, police, and community-based organizations, develop expertise and identify resources for education and training regarding the determinants and prevention of injection drug use and the spread of blood-borne pathogens among persons who use injection drugs;**

12. **That adequate continuing education including addictions, "Standard Precautions", harm reduction and methadone use be provided to physicians, nurses, pharmacists, counselors, social workers, police, corrections workers and community workers;**

13. **That persons who use injection drugs, ex-users and persons living high-risk lifestyles should be involved in the education of healthcare professionals and social services personnel;**

14. **That a community development model engaging various sectors of the community be used to frame prevention initiatives;**

15. **That there be increased undergraduate, post-graduate, and continuing education training for all**

physicians in the areas of screening, diagnosis and treatment of patients with substance dependence disorders; that the College of Medicine make available faculty development, resident training, and accreditation in addiction medicine;

16. **That the College of Physicians and Surgeons of Saskatchewan review the current literature on the indications for and prescribing of Ritalin to ensure appropriate education is delivered to physicians.**

2.1.4 Education for workers in the justice system

Corrections workers need current information on blood-borne pathogens so they can feel confident in dealing with offenders with substance dependency disorders. The continuation of training in Standard Precautions is critical because corrections staff may come in contact with offenders' blood or body fluids. For this reason, knowledge about post-exposure prophylaxis (PEP) is also important. Corrections workers should also be aware of harm reduction measures to prevent the transmission of blood-borne pathogens among offenders. Education for justice workers is important in the utilization of harm reduction measures such as the provision of bleach and condoms for offenders. Education can assist corrections staff to understand why changes are needed and the importance of supporting harm reduction measures.

Police officers, like corrections officers, need information on harm reduction and post-exposure prophylaxis. In programs, such as the one in Merseyside, UK, police officers, after being educated on the merits of harm reduction during the 1980's, took a pragmatic approach to dealing with persons using injection drugs. They focus on referring people who use injection drugs to treatment rather than arresting them. All of the available evidence on HIV infection among Merseyside residents who use injection drugs shows very low rates of HIV and a decrease in drug-related crime (Riley, 1998).

Recommendations

17. **That the Saskatchewan Institute of Applied Science and Technology, Saskatchewan Justice, police colleges and other programs that provide training to correctional officers and police include in their curricula information on Standard Precautions, harm reduction, infectious diseases, and the implications of blood-borne pathogens for persons in prison;**

18. **That Health District Communicable Disease staff in collaboration with correctional centre nursing staff provide in-depth education regarding Standard Precautions, post-exposure prophylaxis, harm reduction and prevention of HIV/blood-borne pathogens to offenders and corrections staff;**

19. **That police college training include the public health benefits of the harm reduction approach and education on the determinants of substance abuse;**

20. **That persons who use injection drugs, ex-users and persons living high-risk lifestyles should be involved in the education of justice workers and the police.**

2.1.5 Educating the community

There is a need for community education and support in prevention efforts against blood-borne pathogens. When the community is educated, the key decision-makers are also educated and can take a lead role in addressing the issue. Visiting experts and journalists who understand substance dependence, and the effect of injection drug use on the spread of blood-borne pathogens, have a strong role to play in community education efforts (Wodak & Des Jarlais, 1993).

2.1.6 Educational materials

To be useful to persons using injection drugs, harm reduction and educational materials should be developed specifically for the drug-using community. The aim of educational interventions may range from discouraging people from beginning to inject to discouraging injecting and sharing among those already taking drugs (Wodak, & Des Jarlais, 1993). Educational materials must be culturally and language appropriate. The Kali Shiva AIDS Services in collaboration with Manitoba Aboriginal AIDS Task Force (1999) developed a manual for people who use injection drugs called 'Peer Training and Resource Manual for HIV Positive Injection Drug Users.'

Organizations such as Community AIDS Treatment Information Exchange (CATIE) in Toronto, the Centre for Addiction and Mental Health (CAMH), Toronto, and the Harm Reduction Coalition (New York) have developed pamphlets and educational materials for persons using injection drugs that could be adapted (with permission) for use in Saskatchewan (see Appendix D for addresses).

Recommendations

21. That the Saskatchewan Government, Health Canada (First Nations and Inuit Health Services Branch), the Federation of Saskatchewan Indian Nations, and the Métis Nation - Saskatchewan research and develop effective approaches for a media strategy to prevent drug misuse.

2.2 Social Determinants of Health and Injection Drug Use

2.2.1 Social determinants associated with injection drug use

Substance dependence problems result when persons lack the basics for health: employment, education, support networks and adequate income. Alternatively, substance dependence directly affects the basic requirements for health. Early life events such as lack of positive interactions place young people at risk for substance dependence, including injection drug use later in their lives. In the same way, early intervention programs assist disadvantaged families (Wiebe, 1997).

Housing

Lack of affordable and safe housing is a risk factor for injection drug use. As Strathdee et al. (1997) maintain, the outbreaks in Vancouver in 1995 were strongly associated with needle sharing and unstable housing. Although Saskatchewan does not have the same problems of homelessness experienced in Vancouver or in Toronto, there are many housing problems that need to be addressed, both in cities and on reserves. Many who use injection drugs in Saskatchewan are transient, moving from city to town to reserve, but they do not have safe, adequate and affordable housing of their own. Women with children wanting to stop injecting drugs are at-risk because relocation to housing in healthier environments is not readily available. Shortages of adequate housing on reserves pose a problem for many Aboriginal people as well.

Poverty

Families living in poverty need opportunities for further education and job training so they and their children can escape poverty. Aboriginal people living in poverty are at increased risk for injecting drugs and acquiring blood-borne pathogens. The populations of Aboriginal people in Saskatchewan are increasing, and social support for families in both urban and rural areas is necessary. Métis and First Nation populations are expected to increase significantly. For example, the Aboriginal population is expected to grow from 117,000 in 1991 to 204,000 in 2011 (Federation of Saskatchewan Indian Nations, 1997). Before the year 2013, First Nations youth are projected to represent 26% of all Saskatchewan youth. At the same time, the total number of youth in the province will decline (Canada, 1993).

Child development — child abuse

Men and women who use injection drugs often have similar histories including sexual and other abuse, poverty, and emotional problems (Allers, Benjack, White & Roussey, 1993; Lodico & DiClemente, 1994; Medrano, Zule, Hatch & Desmond, 1999). Medrano et al., Painter (1986), and Coons (1986) found that childhood sexual abuse was much more common in women who abused substances than for women in the general population. Frankel-Howard (1992) observed that children who were severely neglected are prone to substance dependence. Medrano et al. also found that victims of physical abuse are more likely than non-victims to be diagnosed with substance dependence disorders, as well as depression, post-traumatic stress syndrome and borderline personality disorder. Allers et al. discovered that adolescent survivors of childhood sexual abuse are at high risk for acquiring HIV and that the abused adolescent's focus is on survival, outweighing any care taken to protect their health. As well, some adolescent survivors are depressed and see getting HIV as a way out of their struggles. Allers et al. also noted that being a survivor of childhood sexual abuse contributes to increased risk for acquiring HIV.

Sexual abuse survivor characteristics include chronic depression, re-victimization (those who have been victims of sexual abuse as a child being more likely to be abused in their adult relationships), sexual compulsivity, and substance dependence. These factors prevent a person from learning and practicing protective behaviours against blood-borne pathogens. To assist people who have experienced childhood sexual abuse, and who are at-risk for acquiring blood-borne pathogens, co-ordination and co-operation is needed between addictions agencies, physicians, mental health and other human service organizations (Allers et al., 1993).

The PASS study discovered high rates of physical and sexual abuse among persons using injection drugs (Siushansian et al., 1999). In the study over 60% of persons and their sexual partners using injection drugs had witnessed violence between their parents. Over 55% had witnessed violence between their parents and siblings. Two-thirds reported a history of abuse in their lives. Questions regarding the experience of child abuse before age 16 elicited responses that 38% had been sexually abused; 41% had suffered serious physical abuse; and 53% reported emotional abuse. Females were more likely than males to report both physical and sexual abuse (Young, 1999).

Education

Studies have shown that poor academic achievement and dissatisfaction with school are risk factors for substance abuse by youth (Wiebe, 1997). Results of the PASS study replicated the findings of national and international research in regards to education as a determinant of health. Participants had a low level of education, with only 14% reporting they had attained a grade 12 diploma (Siushansian et al., 1999).

According to Monture-Angus, the effects of Indian residential schools have been painful for many Aboriginal people. They have affected the abilities of Aboriginal people to maintain pride in their cultures and to parent their children (1999).

Family and social environment

More efforts are needed to provide a better environment for young children. Many children are growing up in deprived circumstances or dysfunctional families, exposed to poverty, parental substance abuse, family breakdown and physical, emotional or sexual abuse. When children do not have optimal conditions during their childhood years, they are more likely to develop substance dependence problems in later life (Miller, 1998).

Of the respondents in the PASS Study (Siushansian et al., 1999), 57.5% had lived away from home before the age of 16 years. Nearly 65% of respondents reported that the adults who raised them had drinking problems, and one-third said that those who raised them had mental health problems.

The circle of substance dependence behaviours in adults who use injection drugs is replicated in the behaviours of the next generation (their children). A study by Nurco, Blatchley, Hanlon, & O'Grady (1999) found that children of addicted parents are likely to become involved in deviant behaviour in childhood. As they grow older they are more likely to become involved in using illicit substances.

Access to social supports and resiliency in the face of distress has been identified as important protective factors against injection drug use. Some resilient individuals, despite being exposed to many risk factors, are able to cope well with their problems (Wiebe, 1997). If children have been exposed to individuals who have healthy coping methods during childhood, they are more likely to be able to practice healthy coping. Some at-risk families need assistance to learn and practice healthy coping behaviours.

Health services

Access to drug rehabilitative treatment is an important factor that affects the lives of people who use injection drugs. In a report about addiction and health determinants, Wiebe (1997) states that employment and income, two of the major determinants of health, increase following treatment. He goes on to say that of the contributors to health status, 50% can be attributed to social and economic factors such as poverty, unemployment, education, income distribution, social supports, and social justice. In order to help people who inject drugs improve their health, barriers that prevent them from accessing treatment and achieving social and economic success need to be overcome.

Recommendations

22. **That all government departments and policy makers review their policies, explore strategies, and commit the necessary resources to address the major social determinants leading to injection drug use such as poverty, leaving school early, family breakdown, domestic violence, physical and sexual abuse;**

23. **That interagency partnering be expanded to develop strategies to prevent the sexual exploitation of children;**

24. **That research be conducted in Saskatchewan on the contextual factors (e.g., social relationships, norms, attitudes, societal biases, economics, support systems) that influence risk reduction, injection practices, and lifestyles in the injection drug-using subculture in order to guide program planners in developing services to prevent and/or modify high risk behaviours;**

25. **That all levels of government examine ways and means of increasing the availability of appropriate housing. This may encompass a range of settings including community homes, independent living arrangements, and transition houses for recovering addicts and should acknowledge the particular vulnerability of women, children and the disabled, in order to reduce exposure to a drug-using environment.**

2.2.2 Aboriginal people and blood-borne pathogens

For the purpose of this report, the term 'Aboriginal' is being used to identify First Nations (on reserve and off reserve), Métis and Inuit people. There is much diversity and uniqueness among the groups and their needs and experiences are very different. Creative interventions need to be used for the prevention of HIV and other blood-borne pathogens in Aboriginal persons using injection drugs. There is no research concerning risk factors for HIV and other blood-borne pathogens that separate Aboriginal groups' cultures and life experiences into their respective sub-groupings to compare and contrast their life experiences, risk factors and needs for prevention and education. It has been up to the individual groups to determine the needs within their own community.

Historically, the research has revealed the relationship between poverty, incarceration, the sex trade, and drug use. The numbers of Aboriginal people who live in poverty, remanded in prisons and jails and involved in the sex trade are disproportionately high. Over the past 15 years, HIV/AIDS has increased in the Aboriginal population. In October of 1999, Health Canada Medical Services Branch reported that as of December 31, 1998, a cumulative total of 16,236 AIDS cases had been reported to the Bureau of HIV/AIDS, STD and TB, and of these 321 cases were reported as Aboriginal (Health Canada, 1999b). It is important to recognize that data on ethnicity has only been collected through self-identification since 1990 and this may have resulted in under-reporting of Aboriginal HIV cases.

In 2000, Aboriginal people, whether they be First Nation, Métis, Inuit, or whether they live on or off reserve, represent one of the fastest growing at-risk groups for HIV infection. More than half of newly diagnosed cases of HIV in Saskatchewan are persons who declare themselves to be Aboriginal (Saskatchewan Health, 2000a). Among Aboriginal people in Saskatchewan who were newly diagnosed with HIV in 1998, 83% reported injection drug use as their primary, high-risk activity (Health Canada, 1999b). These recent higher numbers of Aboriginal HIV cases (also see section 1.4) give cause for serious concern, and it needs to be recognized that mainstream (non-Aboriginal) interventions may not be successful in addressing HIV and other blood-borne pathogens among this group.

The Aboriginal people of Canada are among the poorest populations in this country. Their poverty has driven many of them to densely populated areas of urban centres where services are more easily accessed. Unemployment on many reserves is over 90% and even in cities the situation is grave due in part to education shortfalls. Aboriginal youth often find themselves surviving on the city streets through involvement in the sex trade. In recent years the success rate for Aboriginal students has improved. However, the graduation rate from high school and attendance at post secondary institutes is still much lower than among non-Aboriginals. Without hope for the future, it is not surprising that the incidence of drug involvement among Aboriginal people is high.

Life on the street and involvement with drugs and crime result ultimately in incarceration. In 1997, the Research Branch of Correctional Service of Canada published a report on offender populations and forecasts for

1998 to 2007. This report indicated that male Aboriginal offender numbers are increasing at greater rates than other populations (1997).

Nation-wide, Aboriginal offenders in Federal institutions represent approximately 18% of the total offender population. The forecasts suggest that this number will increase by 38.3% by 2007. Aboriginal incarceration rates are projected to increase by 41.3% in the prairies where federally and provincially incarcerated Aboriginal people currently comprise more than 65% of the prison population. Both male and female Aboriginal people are more likely to be incarcerated and less likely to apply, if they do apply, and be granted early release (Correctional Service of Canada [CSC], 1997).

Recommendations

26. That youth, women and Aboriginal-specific research be undertaken in the areas of prevention, treatment, and evaluation;

27. That all levels of government encourage research and explore strategies to address negative effects of Indian residential schools and to assist in the healing of Aboriginal people.

2.2.3 Support for sex trade workers

There is a paucity of research on the combined risks experienced by sex trade workers who use injection drugs. Some research shows that injecting drugs and working in the sex trade increases the risk of acquiring blood-borne pathogens (Watson, Kail, & Ray, 1993). Many studies demonstrate high rates of sexually transmitted infections (STIs) and injection drug use in sex trade workers. Women who trade sex for drugs are more heavily involved in drug use and usually begin to use drugs at an earlier age. Sex trade workers have higher rates of STIs and substance abuse problems than the general population and young people who are involved in the sex trade have frequently been victims of child sexual abuse (Badgely, 1984).

As women become more ensconced in injection drug use and the sex trade they experience a decreased ability to move back and forth between the straight and drug-using worlds. Functioning roles of employee, spouse, and mother become more difficult to fulfill. Loss of employment and custody of children are also common occurrences. Choice of partners for sex trade workers become increasingly limited to people with mental health, addiction, and other problems.

Outreach programs using a harm reduction approach can help sex trade workers reduce the risk to themselves and their sexual partners (Cohen, Alexander & Wofsy, 1990). The primary risk for HIV transmission to sex trade workers is intravenous drug use, so programs need to focus on the importance of using clean needles for injecting (Cohen et al.; Rhodes, Holland, & Hartnoll 1991). Outreach for sex trade workers can be enhanced by hiring people who have worked as sex trade workers or who have had years of experience working with this type of client. Strategies to convince sex trade workers to use condoms with their clientele and regular sexual partners are critical to reduce the spread of blood-borne pathogens and sexually transmitted infections.

Involvement in outreach programs needs to be voluntary and not a condition of probation or perceived as punishment. Cohen et al. (1990) recommends on-going prevention education through street outreach programs, voluntary support groups and workshops. Information about blood-borne pathogens can be given in detail, role-played and given along with other strategies to improve negotiation skills. Since the primary risk of BBP transmission to sex trade workers is injection drug use, it is important that educational and outreach programs include information on the importance of using sterile needles.

Former sex trade workers who serve as role models can help sex trade workers deal with problems such as sexual stigmatization. Access to alcohol and drug treatment and job retraining should be available for those who are willing to be part of a holistic program. Primary prevention efforts must be enhanced.

Recommendations

To support sex-trade workers moving away from life on the street, it is recommended:

28. That adequate financial, family and social support, life-skills and vocational training be available to those involved in the sex-trade in an effort to provide them with alternate choices.

2.2.4 What persons using injection drugs say would help them

Focus groups

Achieving input from persons using injection drugs is considered an important part of determining policy and planning for the introduction or modification of services for people who use injection drugs.

For this report, information was gathered from people who use injection drugs in Regina by means of questions asked in several focus groups of 7 to 13 participants gathered by the South Saskatchewan Harm Reduction Initiative, Inc. Two groups of 8 to 10 young offenders were engaged in a discussion about injection drug use, harm reduction, and the issues and challenges facing young people. In Prince Albert, an outreach worker on the Provincial Strategy Team interviewed four individuals who use injection drugs. In Saskatoon, two focus groups (23 participants altogether) were carried out with people who use or formerly used injection drugs. Questions focused on the needs of persons who use injection drugs and possible solutions to the issues related to injection drug use (Appendix E).

Community groups working with injection drug use issues

In Regina, two community groups formed in 1999. The first group to organize was the Regina Community Task Force on Injection Drug Use. AIDS Program South Saskatchewan and All Nations Hope Network organized this group as a result of community concern regarding HIV and hepatitis C infection among persons using injection drugs and their families. The second group is called The South

Saskatchewan Harm Reduction Initiative, Inc. The group is comprised mainly of people who have experience with injection drugs and was created to look at ways to address the health needs of people who use injection drugs. The group's objectives include public education on harm reduction, reduction of blood-borne infections and other risks associated with injecting drugs.

It does not appear that groups of persons who use injection drugs have formed in other cities in Saskatchewan at this time, even though similar groups have formed in Vancouver and Toronto as well in other countries. The input and empowerment of drug using population groups have been important in harm reduction approaches (Convisor & Rutledge, 1990).

Health services

In the first Regina focus group, participants did not know the range of health services available in the city besides the needle exchange program. In the later focus group they listed a range of services. They commented there were no services addressing the needs of hard-core injectors, especially for people who used cocaine and/or Talwin and Ritalin (Ts and R's). Others said that service providers are unfamiliar with the needs of persons using injection drugs, and that programs set up for Alcohol and Drugs could better treat persons using injection drugs.

Participants said they would like to see a clinic where various services were co-located within a drop-in centre venue. They said it was important that programs include 'clean ex-addicts' as staff; people who had 'been there' and understood the situation of people who inject drugs. There was support for availability of counselling 24 hours a day with guaranteed confidentiality and non-judgmental staff.

Some felt that local researchers should look into the reasons why people begin to inject drugs. They indicated a need for retraining funding to get people back into the workforce, support groups for people who use injection drugs and their families, and support programs for people who have come off methadone maintenance programs.

Needle exchange programs

Many people felt the needle exchange program in Regina needed to have longer hours and be more visible. Some worried there were not enough clean needles being circulated in the city. More than one person made the comment that there were two communities of people who use injection drugs: one in the North Central and one in the Core area. They suggested that both these areas need their own fixed-site for needle exchange. A number of people said they should be able to purchase single needles from any pharmacy when the pharmacies are open. Some pharmacies only sell syringes in bulk (100 units) which is not affordable for many people. Focus group participants mentioned the social stigma attached to being a person who injects drugs. Some were afraid to use government-run services because of lack of trust and fear that their confidentiality would not be maintained. However, they recognized that the needle exchange programs were a chance for individuals to get in touch with outreach persons or other services in the health system. One participant stated:

> *"Needles need to be more available and the addict coming for needles may stay to talk."*

In Saskatoon, participants did not think there were enough services for them. Some felt they should be able to have 24-hour access to clean needles in doctors' offices and pharmacies. Others mentioned the need for a syringe dispenser where you could dispose of needles and get clean ones.

Most youth knew that there were Needle exchange programs in Saskatchewan, but they did not know how to get in touch with them. Female young offenders said more clean needles were needed in the community. It was hard to get needles at night and they were expensive to buy. However, some said they would buy needles at night if they knew where to get them. The male young offenders also felt it was hard to get clean needles at night.

Education

Regarding education, Regina participants felt there should be more education in schools about prevention of drug use and actions to be taken if children found needles on the street. Participants felt they could contribute to public education. Frontline workers such as probation officers, substance abuse counselors, youth detention centre and corrections staff need to be educated about harm reduction approaches, including methadone maintenance treatment. They felt they needed more information about hepatitis C. There was a big concern that young children are on the streets 'hooking' and a way to reach them was needed to end the cycle of abuse and addiction. They expressed concern about what they felt was a lack of education on methadone maintenance treatment for alcohol and drug counselors.

When asked about ways to educate regarding issues of injection drugs, young offenders felt that television could be used as a venue for harm reduction information. Young female offenders said the most education on prevention they had received was during their stay in correctional facilities. They knew there were people available to talk to if they needed to know more information. The female respondents also commented on the amount of information available in the community but that 'youth don't care.'

Support and treatment

When asked what services were needed for them, most of the comments in Regina centered on support and treatment. Some consumers felt a separate detox centre with more treatment for withdrawal would be useful for those on injection drugs. A seamless transition would move a person from a detox facility to a treatment facility without the person having to wait for treatment space.

Considerable discussion focussed on a clinic where people on methadone could go to receive methadone, counselling, or participate in a support group. They spoke of the need for a drop-in centre for persons using injection drugs who had not yet entered treatment. Several people discussed the need for a treatment centre where a variety of services would be available, such as, Aboriginal healing, a 12-step program, methadone maintenance, a program for people who use Ts and R's, and counselling. Saskatoon participants also stated a need for a drop-in centre with counselling. They felt individuals should be able to make choices and decide what their recovery programs would look like. There was agreement that there should be a link to First Nations communities. Participants said they needed help and support in re-entry to community following treatment. As one man said,

> *"We need support and plans on what to do now that we are clean..."*

Women who used injection drugs had strong feelings about the lack of treatment services specifically for women. They felt there needed to be specific treatment programs in addition to programs that helped women coming out of prison. Two women said they did poorly when released from prison because of drug problems that might have been overcome if they had received more support.

In the latter focus group, people wanted to see support groups for children of addicts such as a group offered by the Regina YWCA for children who had witnessed violence.

Regarding treatment, young offenders said there should not be a waiting list. For young people less than 16 years of age, it is difficult to get into treatment. Most felt they would access alcohol and drug treatment in young offender facilities if they were offered, and if they were allowed to look at various areas of their lives in a holistic manner. If treatment was offered to youth only in the community, it should include all people who were drug-dependent under the age of twenty-five years. Some of the young people in the focus group said they would choose a gender-specific treatment program if available. Males also acknowledged difficulties in accessing detox and treatment programs for their age groups. These young offenders recognized a need for a voice in creating new programs and treatment for young people in addition to the need for support when they are released from correctional facilities.

Outreach

Participants from both Saskatoon and Regina agreed there was a need to hire outreach workers with previous street experience, who are now stable and trustworthy. The roles of outreach workers were seen as public educators and helpers to persons who inject drugs access treatment, regain custody of their children, and access job training, jobs, education, clothing and food. One participant, formerly living in Vancouver, commented that outreach workers who provide services in the homes are well accepted. People who use injection drugs also need help in re-entering the community after following treatment and coming out of prison. An outreach worker could provide emotional and practical support to make the transitions easier. One person stated:

> *"Addicts need empathy not sympathy. They need to empower themselves, they need choices and need to take control of their lives."*

Recommendations

29. That all programs should recognize and honour diversity in working with clients, families and communities;

30. That strategies and interventions arising from the recommendations be community-based, where appropriate, and reflect input from consumers;

31. That the overall approach to dealing with injection drug use in the prevention of blood-borne pathogens emphasize harm reduction, be non-judgmental, and respect the wide range of alternative prevention and intervention options;

32. That interagency co-operation and collaboration be continued and strengthened, allowing multiple entry to services needed by persons who use injection drugs and others affected by injection drugs and others affected by injection drug use.

2.3 Public Health and Treatment

2.3.1 Needle distribution and disposal programs

Needle exchange programs (NEPs) have emerged as one of the principle strategies to address the spread of HIV and other blood-borne pathogens (BBPs) in those who use injection drugs. In this report, NEPs refers to any program where clean needles are given out and used ones collected. It does not refer specifically to strict one-for-one needle exchanges. In Saskatchewan different programs have different policies regarding one-for-one exchange or needle distribution without needles having to be returned at the same time.

Despite evidence to support the efficacy of NEPs there has been some controversy. Opponents to NEPs voice concerns over fears of increased drug-use, decreased numbers of drug-dependent persons accessing treatment services and increases in the number of new persons using injection drugs. Two studies suggest increases in blood-borne pathogens within a population of persons using the needle exchange. One study in Montreal linked the NEP in Montreal to an increase in HIV, which caused much concern across the country (Bruneau et al., 1997). Bruneau et al. enrolled 1599 in and out-of-treatment individuals who used injection drugs in Montreal and then prospectively followed 974 who were HIV negative at baseline. Those who attended the NEP were more than twice as likely as other people who used injection drugs and who did not attend the NEP to be HIV positive at baseline. Of those who were negative at baseline, users at the NEP were 1.7 times more likely to become HIV positive during the 15 months that followed than non-users of the NEP.

Subsequently, explanations showed that the rise in rates were due to the fact that those most at risk (who according to the study data, were less likely to be in treatment and more likely to inject frequently) were using NEPs. The fact that they used NEPs was not the cause of their becoming HIV positive (Lowndes & Alary, 1998; Lurie, 1997). The Montreal NEPs were open short hours and exchanged relatively few needles for a city the size of Montreal, inadvertently contributing to sharing of needles (Lurie). Lurie maintains that the results of the study raise no substantial concerns about the effectiveness of NEPs but show ways to improve NEPs. The Canadian HIV/AIDS Legal Network (1999) espoused the importance of making enough needles available to persons injecting drugs and to use needle distribution rather than one-for-one needle exchange, stating that strict one-for-one exchange was one of the contributing factors in Montreal's increasing seroprevalence rate. The same report also encourages secondary distribution of sterile injection equipment from NEPs.

Research on NEPs provides evidence that the use of NEPs is not associated with a rise in disease or drug use and in fact, these programs encourage people who use injection drugs to seek treatment. There has not been an increase in drug use where NEPs have been established (Schwartz, 1993; Singer, Irizarry & Schensul, 1991; Watters, Estilo, Clark & Lorvick, 1994). Other studies show that rather than deterring the number of addicted persons attending treatment, the numbers have actually increased (Des Jarlais & Friedman, 1993; Hurly, Jolley & Kaldor, 1997; Schwartz; Singer et al.). Guydish et al. (1993) provide further evidence that shows there is no increase in the numbers of new injectors as a result of NEPs.

Evidence suggests that NEPs attract high-risk drug-dependent persons who would not otherwise access services and facilitate drug-dependence treatment (Hankins, 1997; Lurie, 1993; Normand, Vlahov & Moses, 1995; Schwartz, 1993). Frequent NEP use in Vancouver is associated with frequency of injecting (cocaine), shooting gallery attendance, non-legal sources of income and borrowing used needles. These factors point to the need for auxiliary programs originating at the NEPs for this hard-to-reach population (Archibald et al., 1998). Hankins (1998) asserts that even though programs exist throughout Canada providing sterile needles and facilitating behaviour change, more access to withdrawal management and treatment is necessary. Needle exchanges also reduce injection risk behaviours (Paone, Des Jarlais, Gangloff, Milliken & Friedman, 1995; Schwartz; Singer, 1991) and decrease the number of HIV-contaminated needles (Durante, Hart, Brady, Madden & No one, 1995; Lurie; Schwartz; Singer) by providing a mechanism for safe disposal. For these reasons, it follows that NEPs have the potential to substantially reduce HIV in the injection drug-using population. Nevertheless, there has been considerable debate around this issue. The difficulty in truly assessing the effectiveness of NEPs in reducing HIV exists, in part, because of the limitations in methodologies and the difficulty in measuring the impact of NEPs (Hankins, 1997; Hurly et al., 1997).

In the PASS study about 40% of the 199 persons who injected drugs had used the NEP in Prince Albert. The most frequent reasons offered for using the NEP were acquiring free needles, convenience, and that it was the only place to get needles. The median number of needles used per day was three to four and participants injected on about 20 days each month. Among people who currently use injection drugs, 50.8% reported they had borrowed or rented used needles in the past six months and one-quarter of these said they used borrowed or rented equipment at least 75% of the time in the past six months.

In the UK, findings from the Health of the Nation initiative concluded that NEPs play a role in lowering the level of HIV transmission (Durante et al., 1995). A larger study which gathered data from five cities (Glasgow, Lund, Sydney, Tacoma, and Toronto) beginning when HIV prevalence was low and stable, concluded that it was possible to severely limit HIV transmission among people who inject drugs despite continuing risk activities. Common prevention strategies used were beginning early, community outreach, and access to clean needles (Des Jarlais, Hagan et al., 1995). Other cities such as Athens, Amsterdam, Vienna and Bangkok have been able to avoid HIV epidemics among persons who inject drugs through early prevention and the provision of sterile injection equipment (Des Jarlais et al., 1992).

The most recent evidence for the effects of HIV prevention in persons who use injection drugs comes from studies conducted in Sweden, the U.S. and Canada. A prevention program was established in the Skane province of Sweden in late 1986 when only a few local people who injected drugs were HIV positive. The programs included needle exchange, education, referrals to drug treatment, HIV testing and counselling. A low seroprevalence rate (<1%) among people injecting drugs indicates a successful HIV prevention strategy for this population (Des Jarlais et al., 1992). In the U.S. a more recent review of published reports on HIV seroprevalence in persons who inject drugs found that in 81 cities where NEPs had been established, HIV prevalence among people who use injection drugs actually decreased. The authors suggest that this effect resulted from a decrease in needle-sharing behaviours, and indirectly through bleach distribution, referrals to treatment, and provision of education and condoms. Despite the possibility of the results being confounded by other HIV prevention strategies, the authors conclude that this study provides strong evidence that NEPs are effective (Hurly et al., 1997).

Recently, Canadian researchers in Hamilton, Ontario reported overwhelming evidence that supports the role of NEPs in reducing HIV infection among persons who inject drugs (Gold, Gafni, Nelligan & Millson, 1997). The study showed that the NEP in Hamilton saves money and reduces suffering. The authors conclude that twenty-four new HIV infections have been prevented over a five-year period resulting in savings of $1.29 million in direct health care costs alone. They conclude that NEPs are an 'efficient use of financial sources'.

Mathematical modeling of HIV infection estimates that NEPs lead to a one-third reduction in new HIV infections. Data sources included serum tests of syringes returned to NEPs (Des Jarlais & Friedman, 1993; Normand et al., 1995). Des Jarlais et al. (1996) cites a reduction in new HIV infections by two-thirds for regular attendees with the NEP in New York City. Evidence from observations by Paone, Des Jarlais & Shi, (1998) suggest that participation in high risk injecting behaviours decrease with ongoing use of NEPs. The authors provide additional support for the effectiveness of NEPs as part of a comprehensive HIV prevention strategy.

Several studies show that the incidence of hepatitis B among people who inject drugs decreased after NEPs were established in Amsterdam, Tacoma and London (Des Jarlais & Friedman, 1993). This discovery suggests that NEPs are likely effective in reducing other blood-borne viruses, such as HCV and HIV.

Hankins (1998) argues that NEPs are not sufficient on their own to decrease HIV. Des Jarlais & Friedman (1993) concur that persons who inject drugs have decreased risks for HIV in response to a variety of prevention strategies including education, access to sterile needles, HIV testing, referrals to drug dependence treatment and outreach services. A single intervention is not likely to be effective for all people who use injection drugs. Different types of programs, integrated and comprehensive services that set the needs of different groups at different times are critical.

Project Red Box, a public safety effort in Baltimore, Maryland, was carried out to see if a drop box in which to place used needles would be useful as a tool to keep used needles out of public places (Smith, Riley, Beilenson, Vlahov & Junge, 1998). Focus groups of seventy-three stakeholders including people who used injection drugs, residents, police and pharmacists evaluated the initiative. Although initially there was skepticism and concern that the drop boxes would not be used and that crime would increase, four boxes were installed within a ten-block radius as a pilot project. The police agreed to exempt individuals who used the drop boxes from current paraphernalia laws that restrict possession of syringes. There were fewer needles found on the streets during the pilot and people were satisfied that the project was working to keep their neighborhoods free from discarded needles. An expansion of the number of drop boxes was recommended.

An example of a creative, innovative and collaborative venture between health and community partners to address an issue related to injection drug use in Saskatchewan can be taken from a project in Saskatoon led by Public Health Services of Saskatoon District Health. In June of 1999, under the direction of the Medical Health Officer, a group of agencies and community associations pooled resources, backgrounds and efforts to develop a needle safety campaign aimed at educating people about the dangers of used needles. The committee believed that needle safety was everyone's concern. Up to that time, Fire & Protective Services and Public Health Services had been tracking where needles were being found. A computer mapping of the data indicated that the problem was city-wide and required a comprehensive solution. 'Needle Safe Saskatoon' was created to decrease the number of needles in Saskatoon streets, parks and back alleys; thereby reducing the public's contact with used needles and the risk of contracting HIV and other blood-borne pathogens.

Over the course of two years, Needle Safe Saskatoon developed a comprehensive, community-based education strategy which included both public and peer education approaches. One component of their campaign was a comprehensive education message targeting children and adults who were at risk of finding used needles in Saskatoon. A video was used by Fire and Protective Services to teach school-aged children about needle safety. Fliers and posters were created to raise public awareness on proper needle disposal when finding needles in their neighborhood. Needle Safe Saskatoon also developed their own video to be used for those at risk of needlestick injuries as a result of their occupation (for example, police, fire, hotel workers, grounds and maintenance workers). In addition, a peer-led education model was developed to teach safe needle disposal to people who use injection drugs.

The second component of Needle Safe Saskatoon was the establishment of a 'community drop box' program. Ten refurbished mailboxes were changed to needle disposal units (drop boxes), marked clearly as biohazard containers, and placed throughout Saskatoon for the safe disposal of used injection drug needles. Prior to implementation, representatives of Needle Safe Saskatoon began a series of informational consultations with community associations and business groups to discuss the community drop box initiative. Suggestions for input were sought and addressed. In addition to the consultation process, letters were sent to every community association with information about Needle Safe Saskatoon, offering further information about the initiatives to put in their respective newsletters. Finally, the Medical Health Officer, with support from the Needle Safe Saskatoon committee made a presentation to the Mayor and Council requesting permission for putting the ten drop-boxes on city property.

Public Health Services continue to work with Saskatoon's Fire and Protective Services, City Police and other community agencies, through Needle Safe Saskatoon, to address improperly disposed needles in Saskatoon. Although the project has not been evaluated to date, the boxes are being used and there has been little opposition to them.

Needle exchange programs provide sensible, compassionate, cost effective service in the community to people who inject drugs (Schwartz, 1993). However, needle distribution and disposal are only two of the components necessary to decrease the prevalence of HIV and other blood-borne pathogens. Others include early intervention when BBP seroprevalence rates are low, education, outreach, and comprehensive services such as BBP testing and addictions counselling. When services are available and persons using injection drugs want to stop injecting, Needle exchange programs can also be a stepping stone to addiction treatment (Strathdee et al., 1997).

Recommendations

Responsive needle exchange programs are needed in order to reduce the transmission of blood-borne pathogens. They are often the only contact that marginalized persons have with healthcare workers. It is recommended:

33. That Saskatchewan Health and Health Canada (First Nations and Inuit Health Services Branch), Federation of Saskatchewan Indian Nations and Métis Nation - Saskatchewan work in partnership with communities, health districts, pharmacies, and professional organizations to develop multiple, accessible sties providing sterile needles, recovery and disposal throughout the province;

34. That needle exchange programs be designed to be flexible, culturally acceptable, accessible, gender and age appropriate and user-friendly, use appropriate outreach personnel, and involve person who use injection drugs and ex-users in their design implementation and evaluation;

35. That needle exchange programs include, where possible, basic core support including medical, addiction and general counselling services, referrals, outreach and information; and that trained outreach personnel, including nurses, be hired to provide comprehensive services;

36. That Public Health explore, in conjunction with person who use injection drugs and a broad range of stakeholders, ways to promote public safety education and disposal alternatives for used syringes;

37. That needle exchange programs and other healthcare providers inform persons who use injection drugs of the procedures and risks regarding the use of bleach for cleaning needles and equipment;

38. That the Saskatchewan Pharmaceutical Association encourages pharmacies to sell small quantities of needles and provide discrete sharps disposal.

2.3.2 HIV and hepatitis testing and immunization

Health care professionals in primary care and other settings can routinely question patients regarding their history of injection drug use, and when appropriate, should counsel, test and evaluate patients for blood-borne pathogens. Persons at risk of infection through limited or occasional drug use, particularly a number of years ago, might not identify themselves as being at risk and may not be tested. Since people who currently use injection drugs tend not to present in the primary health care setting and might not be reached by traditional media, more has to be done (U.S. Department of Health and Human Services, 1998).

Community-based organizations, needle distribution and recovery programs serving these populations can help to determine the best methods of integrating appropriate blood-borne pathogen testing. Testing and pre and post-test counselling for HIV and hepatitis should be services provided by needle distribution and disposal programs. A number of locations for testing should be available in each larger urban centre. Availability of anonymous testing for HIV is an important part of any harm reduction program.

Recent studies suggest that chronic hepatitis C patients should be vaccinated against hepatitis A and hepatitis B. A study by Vento et al. (1998) found that when persons with chronic hepatitis C became infected with hepatitis A, they were at increased risk of fulminant hepatitis and death. The report also showed that persons who had hepatitis B and who then acquired hepatitis A had few complications (Vento et al). However, among persons with both hepatitis B and hepatitis C there was more cirrhosis (98% as compared to 48.5%) and hepatocellular carcinoma (63% vs. 15%) than among those who had hepatitis C alone (Mohamed, Karawi & Mesa, 1997). There is limited data on the course of hepatitis A infections on individuals who have both chronic hepatitis B and chronic hepatitis C (Vento et al.).

Immunization for hepatitis B is an important part of a harm reduction strategy. Saskatchewan Health currently provides publicly funded hepatitis B vaccine for people with the following high-risk indications: hemophilia, thalassemia, dialysis patients, infants born to mothers with hepatitis B, household and sexual partners of hepatitis B cases and carriers, victims of sexual assault, and persons using injection drugs. There is also a provincial school-based program that offers free vaccine to all grade six students before they are at an age where they are more likely to be exposed to the virus.

Related to injection drug use and associated high-risk behaviours, the 1998 Canadian STD Guidelines also recommend that the following high-risk persons receive hepatitis B vaccine:

- Sex trade workers;
- Offenders in long-term correctional facilities;
- Persons who have recently acquired a STI;
- multiple sexual partners; and,
- Sexual partners of any of the above.

People in the above categories are advised to receive the hepatitis B vaccine in order to reduce their risk of acquiring the disease, but currently in Saskatchewan they must pay for the vaccine.

The Canadian Immunization Guidelines (Health Canada, 1998) recommends that universal hepatitis B immunization of pre-adolescents be carried out in addition to the high-risk persons with criteria similar to those listed in the STD Guidelines, including immunization for males in the risk category of MSM.

Recommendations

In the area of testing and immunization it is recommended:

39. That Saskatchewan Health, health districts, Health Canada (First Nations and Inuit Health Branch) and Tribal Councils encourage and provide access to HIV, hepatitis B and C testing, and intensify sexually transmitted infection

control strategies, including early diagnosis and treatment, enhanced contact tracing and promotion of condom use;

40. That Saskatchewan Health expand the criteria for publicly funded hepatitis B immunization to include sexual contacts and the partners of both injection drug users and sex trade workers; and that Saskatchewan Health explore the feasibility of publicly funded hepatitis A immunization for all persons who use injection drugs and who are susceptible and hepatitis C positive.

2.3.3 Alcohol and drug recovery programs including detoxification

The actual proportion of those needing treatment for alcohol and drugs that receive treatment in Canada is not known (Roberts, Ogborne, Leigh, & Adam, 1999). Research suggests that only a small proportion of alcohol or drug dependent persons seeks and receives treatment. Receiving drug and alcohol treatment does not, of course, ensure recovery. Many drug-dependent persons who begin treatment return to using once they have attempted an initial course of detoxification, but they may gain valuable risk reduction information during their time in a detox centre (Convisor & Rutledge, 1990). In the PASS study about 30% of people who used injection drugs in the study received treatment for drug problems during the previous 12 months (Siushansian et al., 1999). An additional 19% received treatment for both alcohol and drugs, while 29% received treatment for alcohol only, despite the finding that 73% of participants showed positive indicators for alcohol problems.

Hospital-based detoxification

Hospital-based medical detoxification is needed for some individuals who require in-patient medical supervision to overcome withdrawal. Medical withdrawal management (under the supervision of physician care) is required for those patients who have severe withdrawal symptoms or have had severe symptoms previously. Although only a small number of persons using injection drugs are likely to need medical detoxification, those who do should be able to be admitted to a regional hospital and treated the same as any other patient who is receiving medical treatment. Further education for hospital staff may make it easier for persons using injection drugs to be able to access this important service.

Severe symptoms of detoxification include abnormal blood pressure and pulse, delirium tremors and seizures, as well as ongoing medical and psychiatric problems, including risk of suicide, complicate withdrawal. The literature reports that some hospitals have been reluctant to admit drug-dependent individuals for withdrawal management.

Hospital staff has an opportunity to work with persons who use injection drugs and facilitate access to testing, counselling, treatment, education and information on avoiding exposure to blood-borne pathogens. According to the Winnipeg Injection Drug Epidemiology Study (Elliot, Blanchard, Dinner, Danwood & Beaudoin, 1999), of the persons who used injection drugs, 98% stated that in the previous 12 months they had received medical help, and almost one-third stated they had been in an emergency room. As well, 31% said they had been hospitalized for a time period of more than 24 hours. These hospitalizations can be an opportunity for nurses, physicians, and social workers to provide people who use injection drugs with information and education on services available to them, including treatment programs.

Social withdrawal management

Withdrawal management is also known as detoxification or 'detox'. Physical withdrawal is the elimination of toxic substances from the body. However, withdrawal has both a physical and psychological aspect. Psychological stabilization and motivation for ongoing recovery are important elements of withdrawal management. The severity of physical withdrawal symptoms varies with the individual. The length of time required for physical withdrawal differs from client to client and depends on the overall health status of the client, the intensity and duration of use and the substance(s) used by the individual.

Non-medical, or social withdrawal management (with nursing care), occurs in a residential setting that provides clients with the opportunity for safe and comfortable withdrawal from substances. Social withdrawal management services often provide educational sessions and assistance with a referral to ongoing recovery services. They provide an opportunity to teach basic harm reduction for persons who use injection drugs in case of relapse. Following stabilization, the client is ready, both physically and psychologically, for continuing recovery that may include outpatient or inpatient treatment. The immediate goals of withdrawal management are to relieve the symptoms of withdrawal, treat any co-morbid conditions and to help individuals achieve a substance-free state. The ultimate goal of withdrawal management is to prepare the individual to enter into long-term treatment or rehabilitation (Hayashida, 1998). The individual treatment plan varies with each client and is based on a thorough assessment. The counselor can discuss various treatment options such as Narcotics Anonymous, in-patient or outpatient treatment, (abstinence-based or not) and methadone programs available to them in the province.

Managed withdrawal can take place at either in-patient or outpatient facilities. The duration of withdrawal treatment may last from 3 to 14 days. Hayashida (1998) reported that the average length of time for outpatient withdrawal was 6.5 days and the average length for in-patient (hospital or other facility) withdrawal treatment was 9 days. Outpatient withdrawal has the risk that the individual may have easier access to injection drugs, and therefore withdrawal management may not be completed. Outpatient withdrawal is not suitable for persons who are suicidal or homicidal, those with complex medical problems, or adverse or disruptive family situations. However, some persons in detox programs, may be putting off the chance to resume injecting drugs until after they are discharged from the facility. Relapse is common in chemical dependency and addictions staff should expect it and not judge people who relapse. Overall treatment outcome has more to do with characteristics of an individual who injects drugs than with withdrawal management settings (Hayashida).

Talwin and Ritalin use in Saskatchewan

As reported in Section 1.4, Saskatchewan's 1998/1999 fiscal year Alcohol and Drug Services treatment statistics show there were 686 people whose most frequently injected mixture of prescription drugs was Talwin (pentazocine) and Ritalin (methylphenidate), also known on the streets as T's and R's. "When combined and injected, Talwin, a painkiller, and Ritalin, a stimulant, produce a brief but intense sense of euphoria similar to the effect of heroin mixed with cocaine. Because of this similarity and their low cost when obtained legally, Talwin and Ritalin have been called the 'poor man's heroin.' " (AADAC, 2002d)

This combination of drugs appears to be a phenomenon of two Canadian prairie cities, Edmonton and Regina, while the use of Ritalin alone is commonly abused by injection throughout Canada and the United States. Although there have been few studies, a Canadian study of juveniles incarcerated in a juvenile detention centre in Winnipeg showed that early inhalant abuse often led to intravenous use of various drugs, including Talwin and Ritalin (Young, Longstaffe & Tenenbein, 1999).

An American study on the intravenous use of Talwin and Ritalin reported that the abuse patterns and symptoms of toxicity were similar to that of cocaine and amphetamine addiction. However, the morbidity and mortality were greater for persons injecting Talwin and Ritalin than for other groups of persons who injected drugs (Parran & Jasinski, 1991). People who injected Ritalin tended to be older (average age 30 years) and had a long history of poly-substance abuse.

A Manitoba study of pregnant women who injected Talwin and Ritalin showed that intrauterine exposure to these drugs was associated with prematurity, growth retardation and signs of neonatal withdrawal, but not with any particular anomaly or severe developmental delay (Debooy, Seshia, Tenenbein, & Casiro, 1993). Debooy et al. found that of 39 infants born to women who used Talwin and Ritalin during the pregnancy, 11 infants required therapy for withdrawal symptoms. It is not known to what extent, if any, people who inject Talwin and Ritalin can be stabilized on methadone treatment.

Morphine use in Saskatchewan

As reported in Section 1.4, data from Alcohol and Drug Services statistics reported that 35% of those who had used alcohol and drug services and reported injection drug use in 1998/1999 had injected morphine or Demerol most frequently. Morphine is an effective painkiller and central nervous system depressant that can be injected, smoked, sniffed, or swallowed. After heroin, morphine has the greatest risk of addiction for narcotic analgesics in common use (AADAC, 2002b). Opioid medications are made from the opium poppy or synthetically produced. Prescription opioids include codeine, morphine, methadone, hydromorphone, oxycodone, pentazocine, and propoxyphene napsylate.

Besides providing pain relief, morphine when injected can produce intense euphoria and a general state of well-being and relaxation. Morphine's effects include drowsiness, lethargy, difficulty in concentrating, mild anxiety or fear, and blurred vision. As the duration of morphine use increases, the person's ability to concentrate is increasingly impaired.

Marked tolerance to many of morphine's main effects can rapidly develop with regular (i.e. daily) heavy use, particularly if injected. Increasingly greater doses are required to produce desired euphoric, analgesic and sedative effects. With protracted heavy use, and compensatory increases in daily dose to maintain the desired effects, the body stops making natural painkillers, so even small pains seem severe when the effect of the opioid drugs wear off. The person using morphine reaches a dose plateau where no amount of the drug can produce the desired intensity of effects (Patten, 1999).

Overdose can result in coma and death. Combining morphine and other depressants like alcohol and tranquilizers is especially dangerous. Dependent persons who quit report severe withdrawal symptoms similar to those occurring upon cessation of heroin use. People report depression, insomnia, sweats, cramps and nausea, vomiting, irritability and pain. It can take months to feel normal. The best way to stop using morphine or other opioid medication is under supervised care (AADAC, 2002b).

Ritalin use in Saskatchewan

As reported in the Section 1.4 of this document, data from the Prince Albert seroprevalence study on injection drug use found that Ritalin was most commonly injected by 70% of the study's participants. Ritalin is the brand name for the controlled prescription drug methylphenidate. It is the drug most commonly prescribed in the treatment of attention deficit disorder (ADD) with hyperactivity in children. When used in higher doses, it stimulates the mind and body in much the same way as powerful central nervous system stimulants, such as amphetamines and cocaine (AADAC, 2002c). When used for non-medicinal purposes, Ritalin is usually crushed into a powder. People then snort it, or dissolve and inject it. When injected, Ritalin might produce an euphoric high even in low doses. Higher doses lead to excitement, states of agitation, confusion and paranoia. Overdosing on Ritalin may produce delirium, seizures and even coma.

People who inject Ritalin for a long time will eventually need more to get the pleasant effects. They become dependent on the way it makes them feel. A Ritalin high can last from 5 minutes to 1 hour, and people frequently inject Ritalin to maintain their high. They may panic if they are unable to get more, and crave it even after they stop using it. When people who are physically dependent abruptly stop using Ritalin, they often state feeling exhausted and severely depressed (AADAC, 2002c).

Cocaine use in Saskatchewan

As reported in Section 1.4, data from the Prince Albert seroprevalence study on injection drug use found that the cocaine was used by 29% of the people who participated in the study. Data from Alcohol and Drug Services statistics reported that 20% of those who had used alcohol and drug services and reported injection drug use in 1998/1999 had injected cocaine most frequently. Cocaine is sold as a fine white powder. Crack is cocaine chemically changed so it can be smoked. People who abuse cocaine, usually snort it, dissolve and inject it, or smoke it (AADAC, 2002a).

Cocaine is a powerful central nervous system stimulant that produces heightened alertness, inhibition of appetite and the need for sleep, and intense feelings of euphoria. Cocaine induces an increased sense of well-being, increased garrulousness, elevated self-confidence and feelings of mastery over the environment, or paradoxically, anxiety or even panic. Symptoms of cocaine use include severe agitation, paranoid thinking, tremors, muscle twitches, nervousness, excitability, memory disturbance and agitation. Cocaine's effects diminish usually within 30-40 minutes and many experienced people inject frequently in order to prolong the drug's effects; they are generally aware of the heightened risks and are also willing to accept them (Patton, 1999). Intense psychological dependence can occur. Some people will remain moderately to severely depressed over extended periods of time when the drug is not available to them, and they remain preoccupied to the point of obsession with obtaining the drug.

The addiction risk of cocaine is among the highest of all drugs of abuse because of two key factors. First, the euphoria produced by cocaine is powerful and heightens sexual desire. Second, because cocaine is highly soluble in water, large amounts can be injected directly into the bloodstream and produce both a very rapid and intense euphoria (Patten, 1999). Overdose can cause seizures, strokes, heart attacks, kidney failure, coma and death. Some people try to modify or stop their use of cocaine by using other drugs like alcohol, tranquilizers or heroin (AADAC, 2002a). Abstinence-based treatment programs have helped many dependent people to stop using cocaine.

Methadone and other pharmaceuticals

Methadone is the most commonly used pharmaceutical for the treatment of opiate dependence and is further described in section 2.3.4. Health Canada, in its 'Best Practices: Substance Abuse, Treatment and Rehabilitation, 1999' (Roberts et al., 1999) recognizes that methadone in adequate dosages with supportive therapy significantly reduces opiate use, criminal activity and transmission of blood-borne pathogens. Methadone programs can improve social functioning, productivity and physical health.

Drugs other than methadone that can be used in the treatment of opiate addiction include naltrexone, LAAM (1-alpha-acetlymethadol) and codeine. LAAM is similar to methadone but lasts longer (72 hours as opposed to 24 hours for methadone). Other than methadone, these drugs are not used extensively and LAAM has not yet been approved in Canada (Roberts et al., 1999).

Gaps in services

The best practices Canadian study on treatment and rehabilitation by Health Canada (Roberts et al., 1999) reveals some treatment gaps in all provinces and territories. The most prominent gap noted in Saskatchewan was the lack of services for Aboriginal women in abusive 'co-dependent' relationships (Roberts et al.). There is only one gender-specific treatment program in the province, a day/evening/weekend program for women located in Prince Albert. It is located in a co-ed setting. Women's support and education programs may be available in some health districts.

Gender differences in accessing treatment

There are differences in the way women and men initiate treatment, utilize referral sources and where they access treatment. Women report a briefer transition from first drug use to addiction and are more likely to have a drug-dependent partner. Some studies found that women receive less support for entering treatment from their partners and family members. When entering treatment, women frequently cited physical and mental health problems, current sexual and physical abuse and greater concerns around issues related to children than do men (Grella & Joshi, 1999). The same study also found that single mothers were significantly less likely to access treatment for injection drugs, suggesting barriers to treatment entry. Women who lack family support for treatment need outreach and encouragement to enter and continue with treatment and single mothers need particular types of assistance. Lack of child-care is a significant barrier for women to access treatment (El-Guebaly, 1995).

Not surprisingly, studies have determined better outcomes in drug treatment for both

men and women if they are able to choose the type of treatment best suited to their needs (Swan, 1999). Where programs were matched to their needs, people stayed in treatment longer, were more likely to complete treatment and had better six-month outcomes than compared to standard care treatment programs.

Youth

Young people in Saskatchewan under eighteen years of age have access to one youth-specific residential program funded by Saskatchewan Health operating out of Calder Centre in Saskatoon. Youth requiring residential treatment who do not attend this centre sometimes go to adult programs in the province. Some health districts provide youth specific outpatient programming.

There are an increasing number of admissions to alcohol and drug treatment services among youth that report injection drug use. This points to a possible increase in injection drug use in the general population of youth less than 20 years of age.

This trend is demonstrated in the admissions data from 1993 to 1999. In 1993/1994 there were 90 youth under 20 years of age admitted to various treatment programs that stated they had injected drugs in the previous year. In 1993/1994, youth comprised 11.4% of total admissions of people who reported use of injection drugs. In 1997/1998, the number of youth admissions reporting injection drug use increased to 172, totaling 16.9% of admissions for injection drug use (Saskatchewan Health, 2000).

Adolescents are more responsive to flexible approaches that can be adjusted to their needs. Programs offering family counselling, behavioural skills counselling, family and peer support and continuing care are most effective. Treatment programs that provide or link to other services such as school re-entry, recreational opportunities, crisis and sexuality counselling, offer a holistic approach to young people who inject drugs (Roberts et al., 1999).

Choices in treatment

People with substance dependence disorders often have multiple problems. People who use injection drugs may have mental health or gambling problems, cognitive impairment, be involved with the criminal justice system, or be prone to violence. Co-ordination of services to meet the needs of

Table 10: Admissions to Alcohol and Drug Treatment for IDU in past year, by Age Group, Saskatchewan, 1993/1994 - 1999/2000*

	1993/94		1994/95		1995/96		1996/97		1997/98		1999/00	
	n	%	n	%	n	%	n	%	n	%	n	%
Age												
< 20	90	11.4	136	14.0	222	18.1	209	16.1	267	16.9	227	15.5
+ 20	702	88.6	832	86.0	1002	81.9	1093	83.9	1316	83.1	1240	84.5
Total	**792**		**968**		**1224**		**1302**		**1583**		**1467**	

**1998/99 data is not available*

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People with substance dependence disorders often have multiple problems. People who use injection drugs may have mental health or gambling problems, cognitive impairment, be involved with the criminal justice system, or be prone to violence. Co-ordination of services to meet the needs of

Table 10: Admissions to Alcohol and Drug Treatment for IDU in past year, by Age Group, Saskatchewan, 1993/1994 - 1999/2000*

	1993/94		1994/95		1995/96		1996/97		1997/98		1999/00	
	n	%	n	%	n	%	n	%	n	%	n	%
Age												
< 20	90	11.4	136	14.0	222	18.1	209	16.1	267	16.9	227	15.5
+ 20	702	88.6	832	86.0	1002	81.9	1093	83.9	1316	83.1	1240	84.5
Total	**792**		**968**		**1224**		**1302**		**1583**		**1467**	

**1998/99 data is not available*

clients presenting multiple problems is critical. In particular, co-ordination is required among mental health, justice, and alcohol and drug treatment systems. Clients with mental health problems may need to remain on their medication while they go through drug treatment programs. At the clinical level, it is important that addiction staff be knowledgeable and supportive of a broad range of treatment options so that programs can be tailored to the individual health needs of the clients, including those who are unable or unwilling to completely abstain from all drugs.

Most studies on the effects of treatment modalities have focussed on individuals using alcohol rather than persons using injection drugs. Health Canada's Best Practice Substance Abuse Treatment and Rehabilitation (1999) provides guidelines that pertain to the treatment of substance abuse, including injection drugs. Social skills training with an emphasis on assertiveness has been proven to be effective for the treatment of people who inject drugs. The method focuses on interpersonal coping skills, such as, coping with cravings, expressing feelings and assertiveness (Roberts et al., 1999).

Abstinence-based treatments

Interventions such as brief motivational counselling deemed useful with alcoholics has not been studied in persons using injection drugs. Although education about drug effects ranked low in studies for addiction treatment, education might be useful as a pre-requisite to behaviour change (Roberts et al., 1999). The use of therapeutic communities (residential treatment homes where people usually stay for one year) tends to be problematic in that there is a high drop-out rate (90%) but Roberts et al. reports those who stay for at least one-third of the 12-month intended time do well after leaving.

Narcotics Anonymous (NA) and Alcoholics Anonymous (AA) are not treatment modalities but work as a support mechanism for the alcohol and drug-dependent person. There does not appear to have been scientific studies on the efficacy of 'Narcotics Anonymous' or other self-help groups for people who inject drugs, perhaps due to the very nature of the programs. However, there are numerous testimonials on their beneficial effects (Roberts et al., 1999). Currently, there are many Alcoholics Anonymous and Narcotics Anonymous programs in the province that individuals may attend without cost. One potential problem with these programs, particularly for persons on methadone, is that they are not accepted in all Narcotics Anonymous groups. Although Alcoholics Anonymous is not philosophically opposed to medication management, the 12-step program is based on abstinence and many people within the program do not view methadone within the parameters of an abstinence-based recovery program.

Individuals with injection drug problems may benefit from group therapy, as some may motivate and help others. It is also thought to be about 40% less expensive to offer services to groups rather than to individuals (Roberts et al., 1999).

Residential versus outpatient programs

There have not been many studies to determine whether persons who use injection drugs benefit more from being in residential treatment or in day-treatment programs. One study (Roberts et al., 1999) of poly-drug using youth that randomly assigned persons to either residential or brief out-patient treatment showed no difference between the rates of drug use at one and two years of follow-up. Since the outcomes were essentially the same in the few studies available, both options should be considered for treatment based on a full evaluation of needs and cost benefit analysis. Some people require residential options because they are in extreme crisis or are not socially stable (Roberts et al.).

The length of treatment required for people who use injection drugs depends on the type of treatment. Persons receiving methadone maintenance do better the longer they are retained in the program. Brief interventions are also not considered effective for those with mental health problems (Roberts et al., 1999).

Comparisons of various modalities of treatment were studied in very large groups of people who used drugs in the Drug Abuse Treatment Outcome Study (DATOS) (Hubbard, Craddock, Flynn, Anderson & Etheridge, 1997). Clients were followed in four different treatment modalities: outpatient methadone, long-term residential, outpatient drug-free, and short-term inpatient. Patients who were not in the outpatient methadone programs tended to use cocaine. Six-month periods of time in outpatient drug-free, long term residential and methadone treatments produced reductions in drug use. Reductions of illegal activity and increases in full-time employment were associated with treatment stays of six months or more (Hubbard et al.). Another DATOS research paper showed better outcomes with longer stays in long-term residential and longer periods in methadone maintenance (Simpson & Joe, 1997).

Co-morbid conditions

There have been few studies on treatment modalities for 'special needs' persons. Some people who inject drugs have concurrent mental health problems and are particularly at risk for contracting blood-borne pathogens. Persons with schizophrenia and bi-polar disorders are more likely to have substance dependence problems than those in the general population. Those with concurrent mental illness and substance dependence problems are more likely to be socially unstable, relapse, have depression and commit suicide. Often people with dual diagnosis tend to 'fall between the cracks' or have difficulties getting their needs met. In a study of dually diagnosed persons suffering from depression and addicted to cocaine, clients were treated with the anti-depressant venlafaxine hydrochloride (Effexor). The majority of patients reported significant reductions in mood swings and a 75% reduction in cocaine use (McDowell, Levin, Seracini, & Nunes, 2000).

Assertive outreach, case management, social skills training and providing co-ordinated services have been proven to be successful in people who have a dual diagnosis. Specialized training is needed for addictions, social services and corrections staff (McDowell et al., 2000). Excluding people with mental health problems from addiction treatment and excluding those with drug problems from mental health treatment should be discouraged. In the PASS study a third of respondents revealed that their father or mother (in most cases their mother) suffered from depression or other mental health problems. As well, 24% of study participants stated they themselves had been diagnosed with a mental health problem.

Acupuncture

Acupuncture is an adjunct therapy that is gaining popularity in various provinces (British Columbia and Manitoba). There is a paucity of scientific studies involving its efficacy. One study found acupuncture to be beneficial for substance dependence treatment (Roberts et al., 1999). Bullock, Culliton, and Olander (1989) found that in a controlled trial of acupuncture with severe alcoholics, individuals having acupuncture at specific meridian points were half as likely as the control group (who had acupuncture at non-specific sites) to drink heavily or be admitted to detoxification centres during a six-month period after the treatment period.

An assessment of client satisfaction in a substance dependence treatment program for pregnant and postpartum women found that satisfaction is positively correlated with treatment involving acupuncture (Sanders, Trinh, Sherman & Banks, 1998). Other studies were found using auricular acupuncture (applied to the external ear) for withdrawal and treatment of people who used cocaine (Ackerman, 1993). Some researchers suggest that acupuncture is a valuable adjunct therapy for chemical dependency treatment and provides a bridge from active substance dependence to readiness for counselling. Improving withdrawal symptoms appears to be a common use for auricular acupuncture (Ackerman). Auricular acupuncture is an adjunct modality in some treatment centres in the United States, used in conjunction with acute drug withdrawal in antepartum and postpartum women (Brumbaugh, 1993).

Success in recovery programs

Studies have shown that successful injection drug abuse programs had certain things in common: flexibility, a case-management approach to client needs, adequate funding and built-in program performance measures (Roberts et al., 1999).

Programs that are unsuccessful tend to be impersonal and inflexible. As well, clients do better when they are well matched to both the treatment program and the therapist. Not all people who inject drugs require the same type of treatment and a variety of flexible and individualized services should be available. Some individuals need services for mental health problems, employment, job training or assistance with housing.

Recommendations

In the area of treatment for persons who use injection drugs it is recommended:

41. That medical withdrawal management services be accessible to each health district;

42. That withdrawal management service providers inform clients of all treatment options available, for example, methadone programs for opiate dependent individuals;

43. That the established alcohol and drug treatment delivery system:

- **a) is able to offer a continuum of treatment options including harm reduction practices and;**
- **b) introduces specialized services as required. Such specialized services would address issues including AIDS, HIV and blood-born pathogens prevention education, Fetal Alcohol Effects and Fetal Alcohol Syndrome, child abuse and survivor issues, family healing, culturally appropriate treatment for Aboriginal people,**

youth and women's treatment, and psychiatric and psychological co-morbidity;

44. That emergency rooms, hospital wards, community health centres and correctional services develop protocols for harm reduction interventions with person who use injection drugs, including access to addiction services personnel;

45. That the Saskatchewan Medical Association and Saskatchewan Health review payment codes for case conferencing and client assessment, and review alternate payment options for funding addiction medicine;

46. That access to supportive recovery programs is ensured for persons using injection drugs and opiate-dependent persons participating in a methadone program;

47. That Aboriginal traditional treatment options be respected and incorporated into treatment services;

48. That health districts examine alternative therapeutic options as adjunct therapies in detoxification and drug treatment;

49. That barriers to alcohol and drug treatment be addressed. These may include accessibility, availability, child-care, family issues, geography, disabilities, economic and custodial concerns;

50. That Saskatchewan Health suggest that health district and community-based alcohol and drug agencies ensure cultural appropriateness in their programs;

51. That Health Canada (First Nations and Inuit Health Branch), Saskatchewan Health, the Federation of Saskatchewan Indian Nations and Métis Nation - Saskatchewan collaborate in addressing substance use issues in their respective jurisdictions.

2.3.4 Methadone programs

Methadone, a synthetic, long-acting opiate-like drug, has been used for over 30 years to treat opiate dependency. It can be used for long-term methadone maintenance or to help persons who inject drugs withdraw from opiate use. Methadone prevents withdrawal symptoms and blocks the euphoric effects of other opiates such as heroin and morphine. Methadone, administered orally in a flavoured drink, reduces the risk of acquiring blood-borne pathogens and other hazards of injection drug use (Roberts et al., 1999) because those on methadone no longer inject, or inject less frequently.

There have been many studies of methadone treatment for opiate dependency (Ball & Ross, 1991; Farrell et al., 1994; Landry & Eliany, 1995). Landry & Eliany state that methadone is safe for long-term treatment and that many people on methadone are able to stay in treatment. Research shows a relationship between methadone maintenance treatment and reductions in high-risk behaviours such as needle-sharing, frequency of injecting, and number of needle-sharing partners (Camancho, Bartholomew, Joe, Cloud, & Simpson, 1996; Marsden, Gossop, Farrell, & Strang, 1998). Methadone treatment improves physical and social health and productivity and reduces the spread of blood-borne pathogens, illicit opiate use and criminal activity (Farrell et al.; Marsden et al.; Roberts et al., 1999). A Health Canada report, by Roberts et al. showing 'Best Treatment Practices', indicates a need across Canada for both the expansion of methadone maintenance treatment services and the licensing and training of physicians to work in this area.

Controlled trials comparing treatment with methadone to placebo found that on measures of illicit opiate use, involvement in crime and mortality, results for persons taking methadone are far superior to the controls taking placebos (Farrell et al., 1994). American studies show that persons injecting opiates are ninety-two times more likely to be using heroin daily and fifty-three times more likely to have been incarcerated than persons on methadone maintenance for twelve months (Farrell et al.). Longer involvement in methadone programs is associated with continued reduction in crime and less opiate use (Ball & Ross, 1991; Farrell et al.).

A Toronto study of persons who inject drugs (Fischeer, Glikman, Rehm, Daniel, & Medved, 1999) shows no difference regarding criminal justice involvement or basic health status between people who currently use injection drugs and those in methadone programs. However, many of those in the treatment group recently had commenced treatment. This study contradicts the findings of Health Canada's Study on Best Practices in Substance Abuse Treatment and Rehabilitation, which found that methadone treatment reduced criminal activities in addition to improving social functioning and physical health. Better outcomes were achieved with longer retention in treatment (Roberts et al., 1999).

Methadone programs have been shown to reduce mortality rates in people who are opiate dependent. A Swedish study shows a much higher mortality rate among persons who use injection drugs compared to persons in a methadone program (Gronbladh, Ohlund, & Gunne, 1990). In the study, persons injecting heroin had a 63 times greater mortality rate than the general population, compared to patients on methadone maintenance who had a 4 to 8 times greater mortality rate than the general population. These higher than expected rates in the methadone patients were mostly as a result of diseases acquired prior to beginning the methadone program.

Although dosage of methadone needs to be individually tailored, those clients on higher dosages (80 mg) tend to do better, have less illicit opiate use and longer retention rates in treatment than those on lower dosages (Farrell et al., 1994; Roberts et al., 1999). Appropriate dosages usually range between 50-120 mg per day and are tailored to individual need (Farrell et al.). Moolchan and Hoffman (1994) show that dosages between 50 and 100 mg are most effective in reducing illicit opiate use. Clients maintained at a dosage of 80 mg and above are twice as likely to remain in treatment than those patients maintained below 60 mg of methadone daily. Maintenance levels lower than 50 mg did not appear to produce adequate methadone blood plasma levels to prevent the onset of withdrawal symptoms in several studies (Marsden, Gossop, Farrell, & Strang, 1998).

Despite evidence that methadone maintenance is effective for opiate dependence, it remains controversial because of its indefinite provision of a dependence-producing medication. Better results are obtained with longer-term methadone maintenance than with methadone treatment that requires clients to become abstinent (Roberts et al., 1999). A recent study compared outcomes of methadone maintenance to a psychologically enriched methadone-assisted detoxification program with forced discontinuation at the end of 180 days (Sees et al., 2000). Methadone maintenance resulted in greater numbers of clients staying with the program and lower heroin use rates than did detoxification.

Methadone programs vary in efficacy. Some programs have 10-25% of patients who continue to use injection drugs, while other less effective programs have up to 56% of patients who continue to inject while on methadone (Farrell et al., 1994). Characteristics of more effective programs are those that use higher dosages of methadone, have goals of maintenance rather than abstinence, address better quality counselling and more medical services, have better staff-client relationships and low staff turnover rates (Moolchan & Hoffman, 1994). It is important to retain clients in continuous treatment, since those who drop out of methadone treatment have an 82% chance of relapsing within the first twelve months. A review of a number of methadone programs and a follow-up study of 1,544 methadone clients (Moolchan & Hoffman) that had been discharged one or more times found success rates of about 8%. Farrell et al. concurred that longer time spent in treatment is associated with better outcomes and cited relapse rates of 70% once individuals left methadone treatment. Those who did well after leaving methadone treatment were usually individuals who left with staff approval and had shorter injecting histories. Based on the above research, an important goal for methadone programs should be to retain the client in treatment for as long as necessary.

Urine analysis should be used to help the physician or counselor discover how well the patient is doing. It gives them the opportunity to discuss illicit drug use, to arrange for more counselling and/or adjust the methadone dosage if indicated.

Customizing dosages and take home medication (carries) to the individual are critical to the success of methadone therapy. These are typically under the control of a methadone-prescribing physician. Under dosing can lead to inadequate receptor saturation and the continuation of withdrawal and craving in the client. Dosages that are too high can lead to drowsiness and respiratory compromise. Providing carries to a person not yet well-stabilized risks overdose and diversion. Not granting carries to a person who is stabilized creates hardship on their work or school, and family life. Quality assurance programs help to educate and support physicians in dosages, monitoring clients, and appropriate schedules for carries. Provinces such as Ontario and British Columbia have quality assurance programs for methadone prescribers and Saskatchewan began this process as of autumn, 2000.

Following a harm reduction conference in 1996, methadone consumer groups in the USA have developed a consensus statement on methadone (Harm Reduction Coalition, 1996). Many of the points they raise refer to respecting the patient and the client-physician or client-counselor relationship. The methadone advocates state that dosages of methadone should not be lowered or withheld to deal with situations such as drugs found in the urine. They believe that clients should know what their dosage is and the dosage should not be raised or lowered without the client's consent. They suggest methadone treatment should be affordable to all. Costs should be kept low and methadone programs accessible so that all clients who would benefit from methadone could be in a methadone program. The methadone advocates also recommended that Narcotics Anonymous (NA) and other 12-step programs consider methadone a legitimate prescribed medication and that those clients who are on medication be considered drug-free and should be allowed to participate in NA.

Most programs consider that, to be optimally effective, counselling must be a part of the methadone program (Miller, 1998). Trained counselors need to establish rapport with the client by demonstrating knowledge of and sensitivity to the client's situation and needs (Moolchan & Hoffman, 1994). The counselor and physician must work together as a team. The client must experience the staff as caring about him or her as an individual and a whole person. The first few months are the most critical in the provision of adequate care, counselling, medical appointments and urine testing. During this period, take-home medications (known as carries) are not given. Later phases include development of personal goals, vocational assessment and planning as well as continued personal and group counselling. Once the individual is well stabilized, and urine testing does not reveal use of other substances, carries of one day per week are sometimes begun. However, even methadone maintenance treatment, offering limited service, to persons using injection drugs who cannot or will not access comprehensive methadone programs substantially reduces drug use and these clients fare better than those not enrolled in any program (Lindesmith Centre, 1996).

Methadone maintenance treatment can be used during pregnancy. It does not impair the child's developmental and cognitive functioning and is the recommended course of treatment for most opiate dependent pregnant women (Lindesmith Centre, 1996).

Recommendations

Methadone is an effective treatment for many individuals addicted to opiates. It is recommended:

52. That physicians and pharmacists throughout the province be actively encouraged to work together to provide accessible, uniform, co-ordinated and integrated methadone programs;

53. That a comprehensive approach to address the full range of client needs include addiction counselling, child-care, housing, and vocational training;

54. That a local interagency committee with potential representation from Aboriginal agencies, pharmacists, human service agencies, persons who use injection drugs, police, corrections, mental health, physicians, nurses, addiction and sexual health counselors be established to have input into each local methadone program;

55. That clients on a methadone treatment program are assured continuation of their program while accessing withdrawal management services for other substances;

56. That results from urine screens be available within three to four days and that point of care urine screens be available in certain circumstances;

57. That the College of Physicians and Surgeons of Saskatchewan maintain an effective quality assurance program for physicians prescribing methadone.

2.3.5 Special problems facing women who inject drugs

Women's situations affect both the risks for acquiring blood-borne pathogens and the way in which they seek treatment and other forms of help. Frequently there is an imbalance of power between women and their partners. Sometimes women are unable to protect themselves from STIs because of the power and strength exerted by their sexual partners (Whynot, 1998). Financial dependence on men has an effect on their ability to make decisions to use condoms and clean needles. Some are forced to have sex in order for their partner to supply them with drugs, or to work as a sex trade worker to support their habit. Often female sex trade workers will use condoms while working but will not use them at home with their partner. This can be risky if the man is using, or has used injection drugs. The PASS study found that 43% of females who inject drugs report never using a condom with regular injection drug-using partners, while 71% of males using injection drugs report never using condoms with their female injection drug-using sexual partners (Siushansian et al., 1999).

Unfortunately, few studies have addressed the problems and issues specific to women who use injection drugs (Whynot, 1998). In Canada, women form a significant part of those using harm-reduction and needle exchange programs. In Vancouver, women comprise about one-third of the six thousand registrants in the needle exchange programs (Whynot). The evaluation of the needle exchange program in Saskatoon District Health shows about half of the clients using the needle exchange program were women (Laurie, 1998).

Women's social status and economic realities are seldom addressed either in research regarding women and drugs or women in treatment (Whynot, 1998). Women are more likely than men to have a sexual partner who injects drugs, are more likely to be financially dependent and less likely to seek treatment independently. Women's positions in the social networks of people using injection drugs may place them at risk. They often have a second-class status in the community where they live, are forced into prostitution by poverty and have a history of being used in prostitution when they were children (Nadeau & Harvey, 1996). Women who use injection drugs may have to engage in unsafe sex in order to buy drugs (Brown, & Weissman, 1993). Chronic despair, low self-esteem and the need for the drug sometimes make them ambivalent about protecting themselves (Nadeau & Harvey; Whynot, 1998). Some women who maybe normally pragmatic, do not use protective measures with men they perceive as having money and being clean, are at greatest risk in acquiring blood-borne pathogens (Nadeau & Harvey). Other women believe to express real love to their partners they need to have unprotected sexual intercourse or share needles with them (Nadeau & Harvey; Whynot). Research by Stephens, Feucht, & Gibbs (1993) and Bernard (1993) shows that women who use injection drugs are more likely to share needles with their spouse or sexual partner than men who use injection drugs. One-half of the women studied said they shared needles about half the time they injected. Needle sharing was also prevalent in the PASS study where 43% of both women and men who used drugs in the previous six months acknowledged sharing equipment to inject (Siushansian et al., 1999).

Whynot (1998) demonstrated that previous sexual assault or physical victimization may be a predisposing factor in drug abuse and that drug dependence is four times higher among women with a history of sexual assault than among other women. Other researchers have also found a high incidence of rape and sexual abuse among women who use injection drugs (Ashery, Wild, Zhao, Rosenshine & Young, 1997; El-Guebaly, 1995; Winfield, George, Swartz & Blazer, 1990). Women in the sex trade are more likely to have been sexually assaulted and more frequently have histories of childhood sexual abuse than other women (Edwell & Hoffman, 1984). As well, women who reported a history of sexual assault were more likely to report that they share needles (Patrick et al., 1997). The results of the PASS and other studies related to histories of child abuse are described in *Child Development - Child Abuse* of Section 2.2.1.

Access to treatment

There are a variety of challenges for women who use injection drugs accessing appropriate treatment. There are no specific treatment programs in Saskatchewan solely for women who use injection drugs (Roberts et al., 1999). As well, women who inject drugs are thought to be under-represented in traditional drug treatment programs (Wells, & Jackson, 1992). Women's childcare duties and social stigma delay recognition and treatment of their substance dependence problems. Often, women's problems with addiction are not diagnosed until they are severe. Substance dependence problems present differently in women than in men and women tend to develop more severe problems in a shorter time than do men. More psychoactive drugs are prescribed for women than for men and women's problems are often considered to be in their minds (Adrian et al., 1995).

Women's treatment needs can differ from those of men, emphasizing the importance of the option of a women's-only program (Roberts et al., 1999). Some differences include: greater social stigma, more negative consequences attached to treatment entry, employee assistance programs where women are less likely to be identified and referred. Women prefer treatments that provide a range of additional programs including continuing care and treatment for children. Women tend to use services more when they include pregnancy and post-partum counselling, legal, vocational and sexual abuse counselling. One study with women who were poly-drug users showed they did better when they had personalized nursing care that included home visits (Roberts et al.).

Although there has been no consensus on the relative efficacy of co-ed versus gender specific programming, one study reported superior results for a women-only alcohol treatment service (El-Guebaly, 1995). However, a few outcome studies confirm that gender-specific programming for substance abuse is more successful than mixed gender treatment programs (Finkelstein, Kennedy, Thomas & Keams, 1997). Copeland, Hall, Didcott & Biggs (1993) maintain that simply adding women-only groups onto existing co-ed services does not establish a gender sensitive or effective program for women, and found no differences in outcomes between a women-only treatment program and a mixed-sex treatment program. Gender-specific programming for women should include treatment components such as case management services, female therapists, individual counselling, housing assistance, violence prevention, mother's support groups to address issues of shame and guilt, sexuality and other issues (Finkelstein et al.). Treatment programs with gender-specific components for women-only are more likely to attract women into treatment. Women with histories of sexual abuse are likely to feel more at ease in women-only services.

As many as 66% of women who use injection drugs may have a concurrent mental health problem. Substance-abusing women are at increased risk for suicide attempts and drug overdose. Critical ingredients for positive outcomes include providing opportunities to discuss women-specific issues and making child-care available (Finkelstein et al., 1997). Successful treatment programs for women are based on identifying their strengths, addressing relationship issues, offering a safe and nurturing environment, having empathetic and caring staff and offering women-only treatment sessions (Finkelstein et al.).

Women may be more likely to refer themselves to self-help groups such as Narcotics Anonymous rather than going to a nurse or doctor (Lundy & Eliany, 1995). They are also more likely to engage in treatment, particularly group treatment (Stocker, 1998). As well, Stocker maintains that women are less likely to relapse and they are more motivated to get into therapy than men. According to Stocker, barriers to treatment that must be overcome by women are child-care difficulties, predominance of male clients and staff and the social stigma associated with female addicts.

Women who use injection drugs during pregnancy fear disclosing this information because babies born to them may be taken into government care (Whynot, 1998). However, women are motivated when they are pregnant and given the appropriate resources, will try to achieve a more stable life at this time. It is estimated that there might be up to 10 times more women who experience prenatal injection drug use than suggested by the number of clinically diagnosed babies born to mothers using injection drugs (Whynot).

Pregnant women have the right to be informed about testing for HIV and blood-borne pathogens and to be offered pre and post-test counselling (Stoltz & Shap, 1999). Alberta has a policy to offer routine testing for HIV and blood-borne pathogens to all pregnant women unless they choose to opt out of the testing process (Alberta Health, 1999). While routine testing means that the vast majority of women will accept testing, this of course, may not ensure women's participation in treatment regimens to reduce perinatal transmission of HIV. In Alberta, however, this has led to more frequent identification of HIV positive pregnant women and enhancing the opportunity for early treatment to reduce the risk of HIV transmission to the child (personal communication. Dr. Larke, 2000). Unfortunately, all women who test positive for HIV may not adhere to anti-viral medication treatment regimes during pregnancy (McGovern, 1999).

With regard to hepatitis C and vertical transmission, the average rate of hepatitis C infection among infants born to HCV positive women is 5-6% (U.S. Department of Health and Human Services, 1998). There is a paucity of data regarding the relationship between delivery mode and HCV transmission. Available data show no difference in delivery mode (cesarean section vs. vaginal delivery). Breast milk does not appear to transmit this hepatitis virus (Ogasawara, Kage, Kosai, Shimamatsu, & Kojiro, 1993).

While all of the recommendations appearing in the report can be applied to both males and females, the following two specific recommendations would enhance women's ability to access the services outlined in other recommendations.

Recommendations

In the area of treatment for women it is recommended:

58. That Saskatchewan Health and Social Services work together to ensure adequate child-care service options are available to clients including on-site child-care and licensed off-site spaces;

59. That a treatment program for females be made available in Saskatchewan.

2.3.6 Culturally appropriate strategies for Aboriginal people

Across Canada increasing numbers of Aboriginal people are being infected with HIV and other blood-borne pathogens. It is clear that strategies are urgently needed to address this situation. Strategies must acknowledge the diversity of First Nations, Métis, Inuit, and on and off-reserve experiences of Aboriginal people. Many unique issues exist for Aboriginal people as they attempt to address the impact within their communities of members becoming infected with HIV and other blood-borne pathogens. These issues exist in an environment with other major health concerns, such as tuberculosis, STIs and diabetes. As well, the residual effects of the residential school experience, marginalization and loss of identity play an important role in health conditions, and in the way health concerns are addressed (Monture-Angus, 1999).

Aboriginal women have identified working in the sex trade as a risk factor for health, and in particular a risk factor for acquiring blood-borne pathogens (Canadian Aboriginal AIDS Network, 1998). Forty percent of all new Aboriginal HIV infections occur in women (British Columbia [B.C.] Aboriginal HIV/AIDS Task Force, 1999). Statistics from the 1998 HIV incidence statistics in Saskatchewan shows 82% of new Aboriginal cases having injection drug use as a risk factor compared to 21% of new non-Aboriginal cases (Health Canada, 1999b). Nationally, 60% of newly diagnosed HIV cases among Aboriginal people cite injection drug use as a risk factor (B.C. Aboriginal HIV/AIDS Task Force, 1999). Interventions must address these risk factors and include prevention strategies and a commitment to a harm reduction philosophy.

There are some very specific ways that education, prevention, outreach and treatment need to be considered in service delivery to Aboriginal people. To enhance cultural appropriateness and effectiveness, Aboriginal persons should develop and deliver services to Aboriginal people. Where that is not possible, Aboriginal people should participate in the development and delivery of programs and services. Some of the educational initiatives that may be most useful to Aboriginal populations include creative and visual education tools, such as community theatre, to address HIV and blood-borne pathogen prevention. Creative ways can be found for community education regarding the value of harm reduction, methadone and safer sex practices. Accessibility includes attention to language issues, level of education and literacy in all educational and preventative programs. Flexible treatment programs, which include the involvement of elders, sweat lodges and traditional spiritual healing, must respect the cultural diversity of Aboriginal people.

Support given to establishing a level of Aboriginal authority representing Aboriginal perspectives would help integrate the needs of Aboriginal people into mainstream HIV/AIDS research and policy planning. Limited resources historically have resulted in community-based workers and organizations being called from their mandated work to fill this void.

Since at-risk Aboriginal people are often incarcerated many times during their life, community-based organizations are encouraged to include offender populations in their mandates. Aboriginal people in Saskatchewan are thirty-five times more likely to be incarcerated than non-Aboriginal people (Wilson, 1999). Correctional facilities, recognizing the importance of HIV/AIDS community agency involvement with offenders, could help by facilitating access to HIV and blood-borne pathogens prevention and educational agencies to their institutions. Programs in correctional institutions can promote initiatives including peer health programs that acknowledge the diversity of Aboriginal populations. Peer health models and peer-directed prevention initiatives are important for Aboriginal offenders and could provide a link to the community that will benefit them upon release.

Recommendations specifically directed to Aboriginal issues are woven throughout this report. While most recommendations can be applied to all Saskatchewan citizens, the following is a specific recommendation.

Recommendations

60. That, wherever possible, programs for Aboriginal people should be directed, developed and delivered by Aboriginal people.

2.3.7 Models of public health practice from other jurisdictions

European countries such as Switzerland, Germany, Britain and the Netherlands have demonstrated pragmatic approaches to reducing harm in regards to injection drug use and the prevention in the spread of blood-borne pathogens. The following section presents a sample of innovative programs and is not intended to be exhaustive.

Switzerland

Zurich, Switzerland has long been a city using pragmatic approaches to reduce risks for persons using injection drugs. The city began to take responsibility for its drug problems more than a decade ago (Riley, 1998), although earlier attempts to address the issue did not succeed. One park in Zurich was left to be a 'safe area' for people who used injection drugs, but became problematic as the numbers grew and many transients from other European cities moved there. 'Needle Park', as it was known, was closed down and Zurich relinquished responsibility of the problem to the Swiss government.

In 1994, the Swiss government began a multi-year scientific trial to provide prescribed opiates to people who had been dependent on opiate drugs for a long time. The trial began with seven hundred people from eight cities who used injection drugs and was expanded to over eleven hundred people in eighteen drug treatment centres (Riley, 1998). The program provided medically prescribed heroin and morphine in smokable, oral and injectable forms. Some take-home heroin-laced cigarettes and some cocaine were prescribed. The program provided vocational assistance, lodging, counselling and treatment for other diseases. A few persons who used injection drugs in prison were maintained on the prescribed drugs. The results of the scientific trial showed that retention rates were high and improvements were evident in both physical and mental health. HIV rates, crime rates, and unemployment rates were reduced. Cost savings were noted in the areas of criminal procedures, imprisonment and HIV treatment. The Swiss government decided to extend the trial after the people of Switzerland voted not only to continue but also to expand the trial (Centre for Addiction and Mental Health, 1999).

Some Canadian researchers advocate that in addition to making methadone more accessible, there should be a controlled heroin substitution trial for persons with a long-time dependence on heroin who have not succeeded with other forms of treatment (Fischer & Rehm, 1997). They argue that the goal would be to investigate the potential of heroin substitution to reduce health and social costs from illicit opiate use to Canadians. Prescribing heroin to dependent persons who would not use methadone would attract clients away from the illicit drug market. The heroin substitution trial, if it were to take place, would make most sense in a place where heroin use is already prevalent. Morphine prescriptions might be considered in places where illicit morphine use is prevalent.

'Safer injection rooms (SIRs)' or 'health rooms' have been established in a dozen European cities in Germany, Switzerland and the Netherlands. The rooms are supervised and legally sanctioned for persons who use injection drugs to inject their own supply. Assisting to inject or selling drugs in or near the facilities is not permitted. Sterile injecting equipment is provided, and medication to counteract overdose is on hand. Some programs offer counselling and other services. Many programs require identification cards and have admission criteria (The Lindesmith Centre, 1999b).

An evaluation of three of these facilities shows they have been effective in reducing HIV and the numbers of overdoses (Riley, 1998). A nation-wide syringe exchange and availability program in Switzerland includes dispensing machines and prison syringe exchange programs. A 1990 study showed that the rate of seroconversion dropped from 38% among persons who used injection drugs in 1983 to only one single seroconversion between 1988 to 1989 (Robert, Deglon, et al., 1990). Switzerland's largest needle exchange in Zurich provides cotton swabs, vein creams, condoms, tea and fruit, as well as primary medical care, HBV immunization, and information on treatment options (Lindesmith Centre, 1999a).

In addition, Swiss drop-in centres for persons who use injection drugs offer an array of services including food and tea are open for six hours daily. Showers, toilets and laundromat services are available. A syringe exchange is also on-site.

The availability of methadone maintenance in Switzerland has tripled between 1986 and 1990 (Lindesmith Centre, 1999a). Zurich houses a special methadone project whose aim is to retain clients who cannot comply with an enhanced methadone program. People who use injection drugs are issued a personal magnetic card and are able to choose the methadone dosage (within a given range) and draw it into a cup. The computerized system keeps track of daily dosages. If clients show compliance through regular urine tests, medical supervision and stable consumption patterns, they are eventually ready for take-home dosages. About half of the clients stayed in treatment during the first year and many went on to enhanced programs with counselling and other services (Lindesmith Centre).

Zurich previously experienced a decline in persons injecting drugs who attended in-patient drug treatment facilities, but an increase in those who sought inpatient psychiatric care. After harm reduction measures began, clients sought help earlier and there were 22% fewer HIV positive patients coming to treatment in 1989 than in 1986 (Lindesmith Centre, 1999a).

Germany

In Germany, the emergence of 'open drug scenes,' increased HIV infections and mortality among persons using injection drugs, as well as increased property crimes led to the implementation of harm reduction measures (Weber, & Schneider, 1998). Drug treatment centres had been faced with dropout rates of up to 90% with their abstinence only orientation (Weber, & Schneider). Since 1992, a variety of services have been established including housing facilities, crisis intervention centres, primary health care, and maintenance with substitute drugs and syringe exchange programs. The creation of medically supervised heroin pilot programs is planned for Frankfurt and Hamburg. In Hamburg, local authorities have adopted a decriminalization policy for possession of small amounts of cannabis (up to 30 grams), cocaine (up to 5 grams) and heroin (up to 1 gram) (Riley, 1998).

Until 1987, methadone was not available in Germany, but pilot projects, after 5 years of evaluation have shown reduction in drug use, criminal activity and improvements in health (Riley, 1998). Other harm reduction programs in Germany include the establishment of 'injection rooms' in 1994/95 and an experimental syringe exchange in two prisons since 1996 (Weber & Schneider, 1998). A German study shows that syringe sharing in prisons is the largest single cause of HIV infection among persons who used injection drugs (Stark, Muller, et al., 1995). As of 2000, there were 13 official injection rooms in Germany and more are planned. Some injection rooms accommodate up to 400 visits per day (Powell, 2000). Since the beginning of intensive harm reduction campaigns in German cities, the percentage of people who inject drugs involved in lethal overdoses, street robberies, thefts and burglaries has declined significantly (Weber & Schneider).

The United Kingdom

The United Kingdom (UK) has been known for its pragmatic response to drugs and HIV by classifying addiction as a public health problem. Lately, the government has announced a 'War on Drugs' that some feel will serve to stigmatize, marginalize and imprison persons who use injection drugs (Stimson, 2000).

In the past, the UK responded to the problem using the following recommendation from the Advisory Council on the Misuse of Drugs (ACMD), 1988:

> *"...we have no hesitation in concluding that the spread of HIV is a greater danger to public health than drug misuse. Accordingly, services which aim to minimize HIV risk behaviour by all available means should take precedence in development plans.' "*

Since 1986, Merseyside Region has given priority to services that reduced the spread of HIV. The Mersey Regional Advisory Committee stated that services should make contact with people who use injection drugs, maintain contact and encourage changes in behaviour. Services have evolved over the years to include thirteen syringe exchanges, offering primary healthcare services to individuals who use injection drugs, including instruction on safer injecting, anonymous HIV testing and diagnosis, and treatment and referral of specific conditions such as abscesses and ulcers. Outreach workers have been used to make contact with hidden populations of persons who inject drugs and great lengths were taken to maximize contact to help them to change their behaviour towards less risky practices. A prescription service from either a Drug Dependency Clinic or Community Drug Team prescribed oral methadone (80%), injectable methadone (15%) or injectable heroin or morphine (5%) (HIT, 1999).

Merseyside police were the first in Europe to extend 'cautioning' practices to any drug, including heroin and amphetamine. Cautioning means that when people are caught with possession of drugs they are taken to the police station, recorded, cautioned, and referred to community services such as addiction treatment. If they are caught a second time, charges may be laid. The effect of this policy has been to divert persons who use injection drugs from crime and imprisonment into health services. Approximately 85% of those cautioned for drug offenses by the Merseyside police did not re-offend (Riley, 1991).

User-friendly drug informational materials, counselling and referrals, as well as residential rehabilitation centres and family support groups are available. Although Merseyside programs have not been evaluated scientifically, anecdotal evidence points to fewer drug-related health problems, less syringe sharing and less crime (HIT, 1999; Riley, 1998)

The rate of HIV infection among people who use injection drugs in the Mersey Region is the lowest in the UK (Drugs and HIV Monitoring Unit, Mersey Regional Health Authority, 1989). From January 1988 to June 1990, Merseyside residents who injected drugs had HIV positive rates of 5 to 6 per million population compared to 12 to 20 for England overall, and 160 to 183 for Scotland (Riley, 1991). By the end of 1994, only 20 people who injected drugs were known to be HIV positive in the Mersey Region (HIT, 1999).

The Netherlands

The Netherlands has been successful in implementing a number of harm reduction practices similar to those mentioned previously in this section. The Netherlands is also known for the social organization of individuals who use injection drugs. In the mid 1980's, groups of people using injection drugs united as a protest against forced detoxification policies (Convisor & Rutledge, 1990). These consumer groups also involved ex-addicts, relatives and friends. Also called 'junkie unions', they were instrumental in establishing the Netherlands' first needle exchange programs and distributing information about prevention of hepatitis B. The consumer groups also became active in forums and prevention activities around HIV/AIDS. While there are not large numbers of persons who use injection drugs participating in the union's activities, many are influenced by their educational messages (Convisor & Rutledge). To date, North American consumer groups have not been as active as those in the Netherlands.

Australia

Australia has had syringe exchanges and other harm reduction measures for years. There was an 18-month injecting centre trial scheduled to take place in Australia as part of its harm reduction measures. Australia has decided to follow the lead of Switzerland, Germany and the Netherlands after 737 Australians died of heroin overdoses in 1998 (Powell, 2000).

Canada

There have been innovative programs to prevent the spread of HIV and blood-borne pathogens in Canada. Programs such as the Street Health Centre in Kingston have developed creative responses to local needs such as the 'Creating a Better Life' program for women who use injection drugs. The Keep Six! Needle Exchange program is an on-site program, providing medical care for clients on methadone and for persons using injection drugs. Volunteers from the Street Health Centre and the community carry volunteer cards and sharps containers to pick up discarded syringes they find in the community, thereby reducing the problem of infection transmission from dirty needles on streets and in parks. Integrated services at one site along with dedicated staff has led to low staff turnover, in turn contributing to high client retention (Ron Shore, personal conversation, 1999).

In Whitehorse, a harm reduction program has been tailored to fit the community. A nurse provides services out of a room in an old hotel to people who use injection drugs. The nurse has 75 to 100 visits per month and combines her work at the hotel clinic with work at the detox centre and prison. The public health program includes testing and immunization, a needle exchange, attention to abscesses and other health concerns, and a chance to sit and socialize over coffee and cookies in the hotel clinic site (Sibald, 1999).

Vancouver has many innovative programs that are attempting to stem the tide of HIV and blood-borne pathogens. One of these is a program operated in the Portland Hotel, an old hotel turned into a supervised housing locale for people who use injection drugs, many of whom have mental health problems. Services such as music therapy, syringe exchange, referrals and acupuncture are available to the residents. Approximately one-third of their extremely high-risk clients progresses and finds better housing and a more stable life. Other programs, such as those provided by Vancouver Native Health Society, include outreach, prevention, and care to people who use injection drugs whom are most at risk.

Recommendations

Regarding models of public health practice to reduce blood-borne pathogens it is recommended:

61. That research be carried out on addictions and harm reduction measures in communities and prisons following European and Australian models or other best practices.

2.4 Cost-Effective Strategies

2.4.1 A cost-effective strategy using an integrated harm reduction model

The individual using injection drugs, his or her family, and society as a whole benefit from harm reduction programs in the community. Single (1999) outlined the economic implications of illicit drug use in Canada and estimated the economic costs of all illicit drugs in Canada in 1992 to be $1.37 billion. About $400 million arose from law enforcement while direct health care costs attributed to illicit drugs were estimated to be about $88 million. The largest proportion of these costs comes from lost productivity as a result of illness and lost years of life. Injection drugs are frequently involved in situations resulting in premature death.

In addition to human suffering and premature death, the economic costs are also high. There are a wide variety of estimates of the costs of injection drug use depending on what the calculations include. Miller (1998) in his report *Pay Now or Pay Later,* suggests direct cost per year per person using injection drugs to be $6,382 including annual direct healthcare and law enforcement costs. This amount does not include healthcare for diagnostic services or preventive programs, costs of treating hepatitis B or C, costs relating to criminal activity, or costs relating to unemployment and lost productivity. The highest proportion of costs (82%) comes from law enforcement, most of which are associated with people using injection drugs going untreated. Miller cites Ontario figures based on in-depth interviews with people who use injection drugs, estimating the annual direct costs to the government to be $33,761 per untreated person. Many of these costs are potentially avoidable when people are in effective treatment. An economic analysis has not been done on the costs of HCV in relation to injection drug use, however because HCV requires expensive medical treatments, it is expected that these costs will also be high.

A cost-effective strategy must include prevention activities. Infection is spreading in marginalized populations. In 1996, Canada's investment in HIV prevention amounted to approximately $2,044 per person living with HIV/AIDS, compared to Britain's investment of $3,900 per person living with HIV/AIDS (Albert & Williams, 1997). The British have 48 persons per 100,000 population living with HIV/AIDS while Canada has 129 people per 100,000 living with HIV/AIDS. Over the next five years, Albert and Williams estimate that providing initiatives focussing on prevention could save $4 billion dollars. A policy framework that emphasizes collaboration of social and health ministries and develops community-level interventions is crucial.

Needle exchange programs

Several studies have proven that needle exchange programs are cost-effective (Gold, Gafni, Nelligan, & Millson, 1997; Jacobs et al., 1999). A study by Gold et al. found that even when using conservative estimates, the Hamilton needle exchange will prevent 24 cases of HIV over five years, creating a savings of $1.3 million after subtracting the costs of the program.

Methadone programs

Methadone treatment and maintenance is another cost-effective program for persons who have developed a dependency on opiates. Benefits include a reduction in criminal activity usually needed to support the habit and a reduction of the social and economic costs of people exposed to blood-borne pathogens through injection drug use (Sedergreen, 1998). People in treatment can often return to the work force, access medical care and have a better quality of life.

Studies in the United States by the National Institute on Drug Abuse estimated in 1991 that it cost society $43,000 US for each untreated person dependent on heroin. The annual cost for keeping the individual in jail was $34,000. Treating a heroin-dependent person in a drug-free program cost $11,000 US. The cost of methadone maintenance treatment for one year was estimated to be $2,400 US (Roberts et al., 1999; Lindesmith Centre, 1996).

Although methadone itself can make a difference in reducing injection opiate use, a comprehensive methadone program is more effective in rehabilitating people who are addicted to opiates (Moolchan & Hoffman, 1994). However, because this model incurs extra costs, Moolchan and Hoffman propose a 'phases of treatment model' that concentrates resources during the early phases of treatment and reduces them in the later phases, thus reducing costs. The first three phases are designed to stabilize the client and allow him or her to attain a relatively 'normal' level of productive functioning. Once the client has achieved this, he or she can continue to receive methadone, some urine testing, medical contact and crisis management, but the intensive part of the program is over.

It is important to be able to provide treatment for persons using injection drugs. Ensuring the availability of effective prevention programs, methadone programs and other addiction treatment provides a cost-effective way to assist persons using injection drugs.

The costs of not applying an effective harm reduction model are very high, not only in terms of human suffering but also in economic terms. The publication HIV, AIDS and Injection Drug Use: A National Action Plan (Health Canada, 1997) estimated that the lifetime cost of treating one person for HIV/AIDS is $150,000 in direct costs alone. Treatment costs are expected to increase as new drugs become available and as they are being used for longer periods of time.

2.5 Legal Policies and Law Enforcement

2.5.1 Adult Correctional Facilities

Incarcerated people are often marginalized, live in poverty and have addictions including injection drug use. Injecting behaviours of many offenders suggests that urgent action is needed to prevent the spread of HIV, hepatitis B and hepatitis C in prisons (Jurgens, 1996). According to the 1994 Final Report of Correctional Service of Canada's Expert Committee on AIDS in Prisons, there are significant numbers of offenders injecting drugs in prisons and becoming infected with blood-borne pathogens:

> *"Some inmates will enter prison already infected; for those not infected when they enter prison, persistent injection drug use in prison without access to clean injecting equipment means that HIV infection will be unavoidable. Some offenders will begin using drugs when they are incarcerated. And a significant number of inmates share injecting equipment for the first time when they are in prison"*

Many offenders report injecting drugs in prison. In the Correctional Service of Canada Inmate Survey, where 85% of offenders in federal penitentiaries across Canada responded, 11% report they had injected drugs during their present incarceration, and only half thought that the equipment they had used had been clean (Jurgens, 1996). The number of persons in prison using injection drugs seems to be rising. Ford, Pearson, et al. (2000) found that 24% of the offenders interviewed in their study stated they had injected drugs in prison compared to 12% in a 1995 study.

The Correctional Service of Canada (CSC, 1997) reports that in 1988 there were 14 persons positive for HIV/AIDS in federal penitentiaries, and by 1997, there were 178 known HIV/AIDS positive persons. In prisons, the HIV prevalence rate is ten times the rate in the general population (Ford, White et al., 1995). Prevalence rates of HIV in British Columbia provincial prisons were estimated to be 1% for men and 3.3% for women (Rothon, Mathias, & Schechter, 1994). In a recent study of an Ontario medium security federal penitentiary housing 520 offenders, 68% volunteered for anonymous HIV and HCV testing. The HIV seroprevalence had risen from 1% to 2%, while the seroprevalence of hepatitis C had risen from 28% to 33% compared to several years earlier. The highest risk for hepatitis C was intravenous drug use outside of prison, but there was a small group who initiated injecting in prison. (Ford, Pearson et al., 2000).

Blood-borne pathogen testing in prisons has also shown that high rates of hepatitis C exist within the prison population. Most cases of hepatitis C are thought to be blood-borne, with sexually transmitted infections being low. A research study conducted in a Scottish prison showed that one-quarter of the offenders who use injection drugs began injecting while in prison (Gore et al., 1995). Syringes and other paraphernalia, such as filters and cookers, are being shared in prison, contributing to the spread of blood-borne pathogens. Being tattooed in prison with equipment and ink used on others creates an extra risk factor for acquiring hepatitis B, C and HIV. In the PASS study, of all persons who used injection drugs in the study, 19% had received tattoos while in prison. The respondents who used injection drugs also said that of all the tattoos they had received, in and out of prison, they thought that sterile equipment was used only 60% of the time (Siushansian et al., 1999).

In a federal prison in British Columbia, the prevalence rate of hepatitis C was 25.5 % amongst the 23% of offenders who were tested (Prefontainen, Chaudbury & Mathias, 1994). Hepatitis C testing in the Prison for Women in Kingston, (which is now closed), had shown prevalence rates of up to 40% among 87% of all offenders who were tested (Ford et al., 1995; Jurgens, 1996).

Prevention of HIV/BBP within correctional facilities

In Canada, several groups have issued reports making recommendations aimed at reducing the spread of HIV and blood-borne pathogens in federal prisons. The best known of these reports was the Expert Committee on AIDS and Prisons (ECAP) (Correctional Services of Canada, 1994). The committee made a number of recommendations for federal correctional facilities in their report. These included: anonymous HIV testing available to offenders; improved medical confidentiality; earlier release of offenders with progressive life-threatening disease; improvements in educational programs regarding HIV; improving protective measures for staff; improving accessibility to methadone; and making bleach available to offenders.

The report suggested making sterile injecting equipment available in prisons was inevitable because of the low efficacy of bleach, when used improperly, in destroying HIV and particularly HCV. However, the Committee was aware that the idea of making needles and syringes available in prisons raised serious concerns. These concerns included fears that needles would be used as weapons and that drug use was being condoned. In response to ECAP's report, the Correctional Service of Canada took the following steps: distributed bleach in federal facilities, increased access to HIV testing, developed an offender peer education and counselling program, improved access to condoms and established a methadone maintenance treatment program.

A pilot project for the distribution of bleach began in December 1994 in Matsqui Institution. The objective of the project was to provide a model on how to best provide bleach and to study the results. The project took several years to implement nationally and bleach is now available in all federal correctional institutions. The discrete accessibility of bleach varies from institution to institution.

The second major report was *HIV/AIDS in Prisons: Final Report* of the Canadian HTV/AIDS Legal Network and the Canadian AIDS Society, prepared by Ralph Jurgens, and published in 1996. It contained many of the same recommendations as the earlier ECAP report. In various places in Canada, there have been some problems in implementing the recommendations of the ECAP Report (Jurgens, 1994). For example, condoms and water-based lubricant were not always available in many institutions. Furthermore, in most institutions condoms were not discreetly available, available only upon request. Jurgens stated that in some prisons, administration, correctional officers and escorts insisted on being informed about every prisoner known to be HIV positive. Offenders, who had progressive life-threatening diseases including AIDS, were not being released early enough to comply with the recommendation of compassionate early release. Particular references were made to the lack of implementation of recommendations for women and Aboriginal people.

Bleach, condoms and lubricant are available in federal correctional facilities, but easier discrete access may be needed in some locations. Hepatitis A and B immunizations are available to all offenders at federal correctional facilities.

Recommendations

In the area of primary and secondary prevention for offenders it is recommended:

62. That suitable latex and non-latex condoms with lubricant, and appropriate education be made available to offenders in a discrete manner;

63. That correctional centres assist and encourage offenders who require antiviral medications to receive them in a confidential manner.

Education and testing for offenders

Prison and health district nurses from Sexually Transmitted Infections (STI) clinics in Regina, Saskatoon and Prince Albert provide education and testing for STI/blood-borne pathogens to offenders. Nurses from the health district STI clinics work for short periods (usually one-half day per week) in the provincial correctional institutions in Regina, Saskatoon, and Prince Albert. Through their work, they encourage offenders to receive testing as well as provide counselling to offenders about blood-borne pathogens and sexually transmitted diseases. Federal Institutions have education programs for offenders when they arrive in the institution. These programs include education about blood-borne pathogens and sexually transmitted infections.

In 1995, AIDS New Brunswick facilitated a peer education pilot project in the federal Dorchester prison. The project was aimed at development and implementation of a sustainable peer education and support model for offenders. In 1998, the Correctional Service of Canada evaluated the peer education model. The resulting national program, the HIV/AIDS Peer Education and Counselling Program (PEC) was developed based on the Dorchester model and on the Choosing Health in Prisons Program (CHIPS) from British Columbia. Training for trainers and nursing staff has been carried out with the new peer education model since 1999. It has been initiated in all regions but not at all institutions at the time of the writing of this report.

Aboriginal offenders and culturally sensitive programs

Aboriginal persons are over represented in Saskatchewan prisons. Saskatchewan Justice statistics show that 60% of males and 73% of females in federal correctional facilities in Saskatchewan are Aboriginal. In provincial correctional institutions, 76% of incarcerated males and 90% of females are Aboriginal (Saskatchewan Justice, 1999). These percentages are very high when one takes into consideration that in 1999, approximately 12% of Saskatchewan residents are of Aboriginal descent (Saskatchewan Health, 1999b).

Culturally sensitive peer-led programs for offenders could be useful in Saskatchewan institutions if they were appropriate and implemented in a way that was acceptable to staff and offenders. Plans for an Aboriginal peer education model are being considered. Meanwhile the Women's Healing Lodge, a federal facility, in Maple Creek has implemented the mainstream peer education model and the federal correctional facility in Prince Albert will begin the program in 2000 (Patti Tait, personal communication, 2000).

Anonymous HIV testing

In the *HIV/AIDS in Prisons Final Report* (Jurgens, 1996), the CSC had not yet approved anonymous HIV testing. However in 1998, Saskatchewan Penitentiary was selected as the site of a Canadian anonymous testing pilot project. A nurse is co-ordinating the project and has consulted with staff and offenders. He is available once a week in the prison to carry out the testing. Offenders and health care staff have accepted the pilot project and it was extended into the 2000-2001 fiscal year. A similar project is being developed in the Maritimes.

In Saskatchewan, Provincial Corrections issued a report *Protecting Ourselves, Protecting Others* (Saskatchewan Justice, 1997) that outlined changes to be made in preventing the spread of blood-borne pathogens in provincial correctional facilities. Various improvements have taken place in provincial prisons in an attempt to deal with the rising blood-borne pathogen rates. The report refers to ongoing education of staff and offenders and the provision of condoms and bleach for offenders. Considerable education and training is offered with the collaboration of nurses from STI clinics in Saskatoon, Regina and Prince Albert. As well, condoms are available in both provincial and federal systems. In provincial facilities, offenders have access to condoms and lubricant when attending the nursing office or by requesting these from the nurse.

Recommendations

In the areas of prevention and education regarding blood-borne pathogens in correctional facilities it is recommended:

64. That voluntary anonymous HIV testing, including pre- and post-test counselling, be available in all correctional facilities;

65. That hepatitis A and B vaccine be made available to at-risk offenders;

66. That peer education and support such as Aboriginal Peer Health models on HIV/AIDS and other blood-borne pathogens be developed and implemented in provincial and federal correctional facilities in Saskatchewan;

67. That appropriate infectious disease, harm reduction programs and gender specific addiction programs be developed to meet the needs of Aboriginal women offenders.

Use of bleach

There has been a considerable amount of research in prisons around the world on needle sharing and blood-borne pathogens. There is debate on the effectiveness of bleach in preventing the spread of HIV and HCV. Full-strength bleach needs to be used appropriately for at least thirty seconds to kill HIV. If bleach is not used properly, it is ineffective in eliminating HIV (Carlson, Wang, Siegal & Falck, 1998; Gleghorn, Doherty, Vlahov, Celentano & Jones, 1994; McCoy et al., 1995; Titus, Marmor, & Des Jarlais, 1994). An earlier study showed that no significant decrease in seroconversion was reported in individuals who used bleach to clean syringes (Vlahov, Munoz, Chilcoat & Nelson, 1991).

In Timothy Moore's paper, from the International Harm Reduction Association Conference in Paris, *Hepatitis C: The Challenges of Prevention*, he discusses the use of bleach in cleaning needles (1997). He maintains that NEPs should only be advocating the use of bleach when clean needles are unavailable. According to Moore, bleach for cleaning needles is ineffective against hepatitis C and should not be promoted as a primary intervention. A recent study, however, showed that hepatitis C virus can be destroyed by prolonging the contact time to 10 minutes or more in syringes, rather than the 30-second time recommended for eradication of HIV (Agolini, Russo, & Clementi, 1999). This lengthy time may be problematic for offenders who use injection drugs because many are not able to follow the 30-second recommendation for HIV, as they have to hide what they are doing. Persons using injection drugs need to be aware that if there is blood in the syringe, no amount of bleach will work.

Participants in the PASS study indicated that out of 150 respondents who had been in jail, 24% had injected drugs while incarcerated. More males than females (32% compared to 13%) indicated they had injected while in prison. However, of all participants who used injection drugs, 65% indicated they cleaned needles in a way that did not adhere to the proper cleaning regime, whether in prison or in the community (Siushansian et al., 1999).

However, in the absence of sterile injecting equipment, knowledge about the use of bleach and access to full-strength bleach used for the appropriate amount of time is an important harm reduction strategy in prisons. Bleach is available in all Saskatchewan federal correctional facilities and in some provincial correctional facilities.

Recommendations

In regards to preventing the spread of blood-borne pathogens among persons using injection drugs in correctional facilities it is recommended:

68. **That offenders receive specific education on how to clean injection equipment, including information on the risks and benefits of bleach and the time needed to sterilize injection equipment, and that an adequate supply of full-strength bleach be discreetly accessible to offenders.**

Methadone treatment and maintenance and other treatment options in prison

In British Columbia Corrections, methadone treatment has been available to provincial offenders for a number of years. Methadone treatment in prison is an important harm reduction strategy as it reduces intravenous drug use and needle sharing in prison.

New recommendations from Correctional Services of Canada in 1998 include making a methadone program available in correctional facilities for those who are already on methadone, and after evaluation, making it available for those who meet the requirements to begin a methadone program in prison. As of May 2000, offenders in federal correctional facilities still needed to have been prescribed methadone in the community before they could receive methadone treatment in prison with the exception of those who meet the criteria under "exceptional circumstances" guidelines. In September 2000, there were twelve persons in Saskatchewan federal correctional facilities on methadone, including those using the "exceptional circumstances" guidelines.

Offenders admitted to provincial correctional facilities who have been established on a methadone program in the community are maintained on the program. Provincial corrections' policy on methadone is being reviewed. The new policy may allow offenders wanting to go on methadone to be assessed for commencement of this treatment while in prison and with subsequent referral to a community methadone program upon release.

A study by Darke, Kaya and Finley-Jones (1998) shows there is a significant reduction of injection drug use in prisons among offenders on methadone maintenance. In their 1998 study, Darke et al. also show that higher methadone dosages in prison were associated with less injection drug use, a fact that is consistent with community studies.

Recommendations

Methadone programs are expanding to meet the needs of persons addicted to opiates in many communities across the country. Regarding methadone treatment for persons in correctional facilities who are addicted to opiates it is recommended:

69. That offenders have equitable access to a medically supervised methadone program.

Tattooing and hepatitis C

Many offenders get tattoos while incarcerated. For some Aboriginal offenders in particular, receiving a tattoo is seen as a rite of passage. Since this activity is not permitted in prison, offenders fabricate materials and share tattoo needles and ink to practice their art. Through this shared equipment, hepatitis C and other blood-borne pathogens can be spread (Jurgens, 1996; Sandhu, Preiksaitis, Campbell, Carriere & Hessel, 1999). The CSC Inmates' Survey (Jurgens, 1996) showed that 45% of offenders admitted to having a tattoo done and 17% said that they had body piercing while in prison. Prevention strategies include making sterile tattooing equipment available for offenders as well as continuing ongoing education about the risks of spreading blood-borne pathogens through the sharing of tattooing and piercing equipment.

Recommendations

Regarding the prevention of the spread of blood-borne pathogens through tattooing in correctional facilities it is recommended:

70. That Provincial and Federal Correctional Services examine current policies and assess the feasibility of making sterile tattoo equipment and materials available to offenders.

Needle exchange in prisons

Needle exchange programs have been allowed in prisons in Switzerland and Germany since 1993. Evaluations of the needle exchange programs in Switzerland completed by outside evaluators showed no new cases of hepatitis C or HIV since the prison programs were initiated. There was also a decrease in needle sharing and no increase in drug consumption. Needles were not used as weapons and there was no active resistance by staff to the needle exchange program (Nelles, Purher, Hirsbrunner, & Harding, 1998). Although some prison staff were initially opposed to implementing the program, they became supportive following staff education sessions.

Prisons in Germany have followed Switzerland's lead and are providing sterile syringes (Nelles et al., 1998).

A study in one prison in the Netherlands found there was very little injection drug use in the prison studied. Therefore, HIV preventive measures in prisons should be considered after taking into account the conditions within each prison (Van Haastrecht, Bax, & Van den Hoek, 1998).

Recommendations

Regarding prevention of the spread of blood-borne pathogens through syringes it is recommended:

71. That correctional facilities continue to investigate and implement internationally recognized best practices around needle exchange.

Support upon release from correctional facilities

Offenders eventually return to the community. Upon release, many people are unable to find help getting housing, employment, or treatment for their addiction(s). Caring for their health in prison and upon release is a measure that protects both the offender and the community. Without support, they often re-enter the cycle of crime and drug use. Offenders leaving prison need referrals to agencies that can assist them in making life-style changes such as housing, addiction treatment (including methadone programs), and social programs. Treatment for their families needs to be accessible. In particular, offenders on methadone treatment require release planning to address the cost of the methadone, cost of travel to appointments, housing and other supports.

There are few programs and supports for offenders upon release from prison. Programs such as the one at the *Oskana Centre Federal Half-Way House* (Regina) help people who use injection drugs to deal with their addiction through accessing treatment and methadone programs as well as educating them about infection control.

There are five community training residences for men coming out of the provincial correctional system throughout Saskatchewan and one for women located in Saskatoon operated by the *Elizabeth Fry Society*. These centres allow persons with high levels of need to return to the community in a structured and supervised environment.

Offenders who are being released and who have been diagnosed with a major psychiatric disorder are referred to a Mental Health Clinic. If they do not have a history of mental illness with severe symptoms they need to access addictions services in the community rather than mental health services.

Recommendations

72. That interagency efforts support post-release client re-integration. Collaboration will facilitate access to housing, social support, addiction counselling, education, and life-skills training.

2.5.2 Young Offender Correctional Facilities

Youth are a particularly vulnerable group with regard to acquiring blood-borne pathogens. There has been an increase in the number of Saskatchewan youth entering treatment for injection drug use (refer to Section 2.3.3). Many youth that are incarcerated have a history of injection drug use. Although the numbers of youth (under 20 years) testing positive for blood-borne pathogens are not increasing substantially, there have been substantial numbers of young people between 20-29 years of age who have tested positive for HIV and HCV (refer to Section 1.4.2). This data emphasizes the importance of effective prevention programs for young persons in their teens so that they do not begin using injection drugs. Harm reduction programs are needed for young people already using drugs so they can protect themselves from acquiring blood-borne pathogens.

The Prisoners with HIV/AIDS Support Action Network (PASAN) is a national community-based network of offenders, ex-offenders, organizations and individuals providing advocacy, education, and support to offenders and young offenders. PASAN's report, *HIV/AIDS in Youth Custody Settings: A Comprehensive Strategy (1996),* recommends changes in youth correctional facilities regarding education, prevention, privacy of health status, informed consent for testing, and provision of measures for safer sex and safer injecting.

Young offender institutions need to continue in their efforts to provide education about blood-borne pathogens to youth in custody. Youth may form strong attachments with staff in correctional facilities. Therefore, education about reducing the risks of acquiring blood-borne pathogens should be given by staff in collaboration with community-based organizations, or staff from the STI clinics, depending on the particular situation. When possible, peer-led educational sessions are useful in sharing this information. As well, staff may offer referrals to treatment facilities in the province. In young offender facilities, condoms are available upon release or when youth obtain passes to leave the institution.

Immunization for hepatitis B is an important preventive measure. Routine hepatitis B immunization was introduced in Saskatchewan for children in grade six in September 1995. Nurses from one health district public health program have looked into the feasibility of a hepatitis B immunization program in Saskatchewan young offender facilities for youth that have not received the immunization as part of the school program. To begin this program, health record communication between young offender facilities would have to be improved and more staff might be needed to track the youth being immunized so that the complete schedule of doses could be given. The new two-dose regime (not yet being used in Saskatchewan at the time of writing) would facilitate completion of the series. Immunization is currently not provided for those in young offender facilities that have a history of injection drug use. However, staff should inform youth using injection drugs that immunization is available at no cost through local public health services. Information for accessing these programs should be provided to youth when they are discharged from young offender facilities.

2.5.3 Drug Treatment Courts and the justice system

Drug Treatment Courts are courts dedicated to cases involving drugs and have been used in the United States since the early 1950's (Belenko, 1998). Research on American Drug Treatment Courts has found that retention rates for treatment were greater than in traditional treatment settings. Drug Treatment Courts provided more supervision and drug testing, saved costs from reduced prison use, reduced recidivism and lowered criminal justice costs. As well, drug use and criminal behaviour were substantially reduced while the offenders participated in drug court (Belenko).

In Toronto, the Federal Government has begun to fund a Drug Treatment Court (Canadian Centre on Substance Abuse, 1998). The Court's objective is to reduce drug-related crimes by decreasing drug use through judicially supervised treatment programs and community support. Vancouver justice and health officials have also been studying the possibility of using Drug Treatment Courts. Although, Saskatchewan has a lower number of drug cases than American centres or larger Canadian cities, Drug Treatment Courts provide a model that appears to work effectively with some people who use injection drugs.

In addition to using Drug Treatment Courts some provinces are using provisions from Bill C-41 to direct people whom misuse drugs into treatment instead of having them serve time in prisons. Although some policy makers were concerned about resistance and lack of motivation of clients under mandatory treatment conditions, others felt that clients who were sent by the courts to treatment are even more motivated.

Many policy makers agree that for treatment to be effective, it requires the individual's voluntary consent (Addiction Research Foundation, 1996). Saskatchewan has some prison diversion programs (Alternate Measures Programs). Sometimes sentencing circles are used to determine a sentence or a drug addiction program is ordered as an alternative to a prison sentence.

Recommendations

Regarding the justice system and persons who use injection drugs it is recommended:

73. That research on Drug Treatment Courts be explored to determine if there would be a better approach to persons using injection drugs in Saskatchewan who are not involved in violent crimes;

2.5.4 Police involvement in harm reduction

City of Regina Police and City of Saskatoon Police involve at-risk youth in camping and canoeing trips with police officers, Aboriginal elders and role models. However, despite these successful programs, there are few programs specifically for at-risk youth (those using injection drugs) in other parts of Saskatchewan (Sergeant Blanchard, RCMP, personal communication, 1999).

The Merseyside program in Liverpool, England has been a successful model for harm reduction. Police are involved in the harm reduction strategies by using a "cautioning" method for dealing with people who use injection drugs and who are caught with possession of narcotics and other illicit drugs (see section 2.3.7). Although not scientifically evaluated, Merseyside programs involve many sectors of the community including the police in harm reduction initiatives. Merseyside HIV incidence rates remain low.

In the 1980's, police in Edinburgh, Scotland were much stricter in their treatment of persons caught using injection drugs than were police in the Glasgow area. During these years in Edinburgh, police arrested addicts for minor infractions, such as carrying needles. This act drove many people who use injection drugs to shooting galleries where as many as fifty people would share one needle. Between 1983 and 1984, the HIV seropositivity rate in the injection drug group rose from 3% to an estimated 59%. In comparison, in Glasgow during the 1980's, individuals were not arrested by police for carrying needles and the HIV seroprevalence rate remained low (Convisor & Rutledge, 1990). Glasgow also had a needle exchange program.

Police in Switzerland support local harm reduction programs. Those being arrested for drugs were people who were trafficking large quantities, while those who injected drugs but did not sell them were "cautioned" and directed to treatment programs (Riley, 1998).

In Canada, the *Controlled Drugs and Substances Act, 1996*, has made some changes in the way that drug charges are laid. If a person is caught with possession of a small amount of a cannabis product (marijuana or hashish) they do not face criminal charges but are fined. If they have a larger amount of cannabis products (over 30 grams) or are growing plants, they can be charged with a criminal offense, fined, jailed, or given a conditional sentence. The judge's decision depends on whether they were caught during another crime, and if they had a past criminal record. The judge might give them a conditional sentence, with conditions such as a curfew, abstinence from drugs, and alcohol and drug treatment. If they meet the conditions, they avoid going to prison.

If they are caught with any amount of narcotics or prescription narcotics, such as, heroin, Talwin, morphine or Dilaudid without a prescription, or other categories of drugs such as cocaine, they can be prosecuted for a criminal offense.

If a "cautioning" process similar to that in the UK or Switzerland were ever feasible in Saskatchewan, it would depend on many factors: the amount of the drug, whether it was a first offense, whether they were involved in another crime (i.e., assault, break and enter), and whether treatment facilities were available within a reasonable period of time. If the person were a youth, parents would be notified, then agree with the option of treatment.

Police records do not always identify predisposing factors leading to a crime. Records do not disclose when cases are related, directly or indirectly to drugs. For example, a break and enter charge may or may not be related to acquiring money to buy drugs. More detailed information is needed to identify the percentage of crimes associated with illicit drug use.

Recommendations

Regarding the justice system and police services it is recommended:

74. That courts, prosecutors and police enhance the use of discretionary measures and evidenced-based alternatives in dealing with drug dependent persons. These alternatives could include sentencing circles, Drug Treatment Courts, diversion programs, use of elders and healing lodges to facilitate healing among persons who use injection drugs and are involved in the Justice System;

75. That police departments develop a data base that reports all drug-related crime to better assess the association between crime and substance dependence.

CONCLUSION

The growing prevalence of blood-borne pathogens, such as HIV and HCV, associated with the use of injection drugs is a serious public health problem. This problem is primarily a health and social issue although police and corrections have an important role to play in preventing the spread of blood-borne pathogens by facilitating harm reduction measures and accessing treatment for drug-dependent persons while incarcerated.

Determinants of injection drug use include poverty, low educational levels, being involved in the sex trade and a history of physical or sexual abuse. Public health efforts in prevention need to be made in various areas including educational programs, outreach and support for high-risk youth and adults. In order to prevent the spread of blood-borne pathogens among persons using injection drugs and their partners, needle exchange programs, education, counselling and treatment programs must be accessible to drug-dependent individuals. Resources to assist families break the cycles of poverty, abuse and substance dependence are an important part of a prevention strategy.

Although a number of supportive programs exist for at-risk youths and persons who are involved in injection drug use, enhancement of these programs and the creation of others to meet the needs of marginalized populations is needed. Prevention and treatment programs need to be culturally appropriate and sensitive to the needs of Aboriginal persons. Co-operation and co-ordination between government departments, community organizations and involved programs and services are necessary to develop and implement these programs. Involving persons who use and have used injection drugs is an important element in this work.

APPENDICES

A: Terms of Reference

B: Members of the Provincial Strategy Team

C: Guiding Principles and Values

D: Addresses for Educational Materials

E: Questions for Focus Groups with Persons Who Use Injection Drugs

F: References

G: Key Terms and Glossary

Appendix A: Terms of Reference

1.0 Purpose Statement

1.1 The strategy team will, within its term of office:

i) provide recommendations to the Chief Medical Health Officer (CMHO) for a provincial strategy to reduce the incidence of HIV and other blood-borne pathogens as they relate to injection drug use, its determinants and associated risk behaviours.

2.0 Functions

2.1 Review the changing epidemiology related to HIV and other blood-borne pathogens and injection drug, and advise the CMHO regarding dissemination of this information.

2.2 Identify and summarize services, prevention activities and public awareness initiatives currently available to injection drug users and their partners within the province.

2.3 Develop a clear, action-oriented, targeted Provincial action plan on HIV and other blood-borne pathogens and Injection Drug Use, focusing on the most urgent priorities which can be implemented rapidly, but also on long term priorities and solutions. The underlying philosophy of the strategy team reflects a commitment to harm reduction in the interest of achieving the lowest possible incidence of HIV and other blood-borne pathogens associated with injection drug use.

2.4 Identify mechanisms to assist in policy development at the Provincial, Federal, Aboriginal, District, and Municipal levels, targeting decision makers and sensitizing them to issues regarding injection drug use.

2.5 Recommend strategies in keeping with a population health approach for broad and comprehensive intersectoral approaches incorporating education, preventative and treatment services for injection drug users and their partners.

3.0 Membership

3.1 The team will consist of representatives invited from:

- All Nations Hope AIDS Network
- Saskatchewan AIDS Network
- Alcohol & Drug Abuse Advisory Council

- Saskatchewan Medical Association
- Saskatchewan Advisory Committee on AIDS
- Prince Albert Health District
- College of Physicians & Surgeons of Saskatchewan
- Corrections Division, Saskatchewan Justice
- Needle Exchange Program -- Health District
- Saskatchewan Pharmaceutical Association
- Methadone Program - community professional
- Federation of Saskatchewan Indian Nations
- Medical Services Branch of Health Canada
- Consumers of services (2)
- Saskatchewan Federation of Police Officers
- Saskatchewan Social Services
- Alcohol and Drug Rehabilitation Centre
- Métis Nation Saskatchewan

3.2 Substitutes may participate when a member cannot attend.

3.3 Others may be called upon for consultation or participation on an ad hoc basis with the approval of the CMHO.

3.4 Membership shall be for a one-year term that may be extended by the CMHO. (This was extended due to the complexity of the issue and the thoroughness of the report).

3.5 The co-chairs will be selected by the Chief Medical Health Officer.

3.6 Secretariat service will be provided by Saskatchewan Health.

4.0 *Commitment*

4.1 The team will meet four to six times over a one-year period (the term of the strategy team).

4.2 The strategy team will decide the date and location of meetings.

5.0 Accountability

Saskatchewan Health will cover the cost of the meeting space, secretariat support and lunch on the meeting date. Other costs incurred to attend meetings will be the responsibility of the sponsoring agency. For those not representing agencies or organizations, funding will be provided for expenses incurred.

6.0 Deliverables

The team will strive to produce a strategy framework document within one year, subject to article 3.3. (This term was extended.)

Appendix B: Members of the Provincial Strategy Team

Titles and positions identified are for the year 1998

** steering committee member*

Ms. Ario Yuzicapi Fayant (co-chair)*
Director
All Nations Hope AIDS Network
Regina, Sask.

Ms. Kathleen Donovan (co-chair)*
Consultant
Alcohol and Drug Programs
Community Care Branch
Saskatchewan Health
Regina, Sask.

Dr. Eric R. Young*
Deputy Chief Medical Health Officer
Director, Communicable Disease Control
Population Health Branch
Saskatchewan Health
Regina, Sask.

Ms. Cathy Ellis*
Researcher and co-ordinator
Population Health Branch
Saskatchewan Health Regina, Sask.

Ms. Barbara Anderson
Supervisor, Healthy Lifestyles Department
Sexual Health Program
Saskatoon District Health
Saskatoon, Sask.

Mr. Blair Buchholz
Manager of Youth and Family Programs
Calder Youth Program
Calder Centre
Saskatoon, Sask.

Dr.Peter Butt
Alcohol & Drug Abuse Activity Committee;
and Saskatchewan Medical Association
Saskatoon, Sask.
c/o Director, Northern Medical Services
University of Saskatchewan, Saskatoon, Sask.

Dr. Clarence Clottey
Chair,
Saskatchewan Advisory Committee on AIDS
Saskatoon, Sask.

Mr. Don Favel
Health Minister
Métis Nation - Saskatchewan
Ile a la Crosse, Sask.

Ms. Donna Gamble
Community member
Prince Albert, Sask.

Constable Caroline Houston
Regina Integrated Drug Unit
Regina Police Services
Regina, Sask.

Dr. Shauna Hudson
Medical Health Officer
Medical Services Branch
Health Canada
Regina, Sask.

Ms. Maureen Laurie Supervisor
Sexual Health Program - Street Outreach
Healthy Lifestyles Department
Saskatoon District Health
Saskatoon, Sask.

Dr. Lowell M. Loewen
Deputy Registrar
College of Physicians and Surgeons of
Saskatchewan
Saskatoon, Sask.

Ms. Clare McNab
Director, Health
Federation of Saskatchewan Indian Nations
Saskatoon, Sask.

Mr. James Obey
Community Member
Regina, Sask.

Mr. Grant Obst
President
Saskatchewan Federation of Police Officers
Saskatoon, Sask.

Mr. Frank Regel
Director of Community
Services Prince Albert Health
District Prince Albert, Sask.

Ms. Christine Smith Executive
Director, AIDS Regina
Saskatchewan AIDS Network
Regina, Sask.

Ms. Patti Tait
All Nations Hope AIDS Network
Debden, Sask.

Dr. Mark Vooght
Medical Health Officer
Medical Health Officers Council of
Saskatchewan
Prince Albert Health District
Prince Albert, Sask.

Mr. Brian Williams Senior
Policy Analyst Deputy
Minister's Office Saskatchewan
Social Services Regina, Sask.

Ms. Nida Wurtz
AIDS Coordinator,
Manager of Communicable Disease Control
Population Health Branch
Saskatchewan Health
Regina, Sask.

Mr. Wayne Wurtz
Field Officer
Saskatchewan Pharmaceutical Association
Regina, Sask.

Mr. Terry Youngman
Senior Standards and Inspections
Officer/Transfer Coordinator
Corrections Division
Saskatchewan Justice
Regina, Sask.

Sub-committees of the Provincial Strategy Team

1. Legal sub-committee

Terry Youngman (chairperson)

Cathy Ellis

Grant Obst / Caroline Houston

Patti Tait

Eric Young

2. Community-based organizations and Social Services sub-committee

Christine Smith (chairperson)

Ario Yuzicapi Fayant

Donna Gamble

Brian Williams

Nida Wurtz

3. Public Health sub-committee

Clare McNab (chairperson)

Barbara Anderson

Clarence Clottey / Mark Vooght

Maureen Laurie

4. Clinical sub-committee

Kathleen Donovan (chairperson)

Blair Buccholtz

Peter Butt

Lowell Loewen

Jimmy Obey

Frank Regel

Wayne Wurtz

Appendix C: Guiding Principles and Values

- We must use a holistic approach based on current best knowledge and practices.
- The underlying reason for these recommendations is the protection of individuals and the public at large from harm caused by injection drug use.
- Persons with the experience of using injection drugs must be involved in the processes which affect them.
- Suggested strategies will attempt at all times to recognize and respect the diversity among individuals and communities when designing programs, policies and recommendations including:
    - Human Rights
    - Age
    - Culture
    - Gender
    - Sexual Orientation
    - Spiritual Preference
    - Colour
    - Place of Residence
- All individuals and communities have a right to fair, reasonable access to appropriate care, service and information.
- We will respect the right of individuals to make decisions.
- People will be accepted as they are.
- Communities, families and individuals must be part of the process and share the responsibility for prevention, education, treatment and support.

Appendix D: Addresses for Educational Materials

Community AIDS Treatment Information Exchange (CATIE)
420 - 517 College Street,
Toronto, ON M6G 4A2
Ph: 1-800-263-1638 or (416) 944-1916

Do It Now Foundation
Box 27568
Tempe, AZ 85285 USA
Ph: 602-736-0599

Harm Reduction Coalition
22 West 27 - Street, 9th Floor
New York, NY 1001 USA
Ph: (212) 213-6582

Centre for Addiction and Mental Health (CAMH)
33 Russell Street
Toronto, ON M5S 2S1
Ph: (416) 535-8501

HIT
Cavern Walks 8 Mathew Street Liverpool, UK L2 6RE
Ph: 44 (0151) 227 4012
Fax: 44 (0151) 227 4023

Appendix E: Questions for Focus Groups with Persons Who Use Injection Drugs

1. Are the services that exist now enough to deal with the problems faced by persons who use injection drugs?

2. What would you like to see in the community to protect people against diseases like HIV and Hepatitis?

3. In your opinion, what are your most serious problems right now?

4. Using your imagination, what would the ideal program be in the community for persons using injection drugs?

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Appendix G: Key Terms and Glossary:

Abstinence:

Complete abstention from the use of alcoholic beverages or other abused drugs at all times.

Acquired Immunodeficiency Syndrome (AIDS):.

AIDS occurs when HIV attacks the immune system, resulting in a chronic, progressive illness and leaving infected people vulnerable to opportunistic infections and cancers. AIDS is generally diagnosed when an HIV positive person has one or more associated diseases such as certain types of cancers like Karposi's Sarcoma or lymphoma, or infectious diseases like disseminated tuberculosis, esophogeal candidiasis, or toxoplasmosis of the brain, among others.

Attention Deficit Hyperactivity Disorder (ADHD):

ADHD is a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development. (Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition [DSM-IV])

Blood-borne pathogens (BBPs):

Besides HIV, these include hepatitis B and C among others.

Harm Reduction:

A set of strategies that encourage persons who use injection drugs to reduce harm to themselves and communities caused by their licit and illicit substance use. Harm reduction is based on public health principles. It is a policy or program directed toward reducing or containing the adverse health, social and economic consequences of alcohol and other drug use without requiring a reduction in consumption or abstinence from drug use (Saskatchewan Health, Principle 12 in *Saskatchewan Model of Recovery Services*).

Hepatitis B Virus (HBV):

The virus that causes hepatitis B.

Hepatitis C Virus (HCV):

The virus that causes hepatitis C.

Human Immunodeficiency Virus (HIV):

The virus that causes AIDS.

IDU:

Injection drug use

MACSI

Métis Addiction Council of Saskatchewan Inc

MSM

Men who have sex with men

NEP:

Needle Exchange Program

PASS:

Prince Albert Seroprevalence Study

STI:

Sexually transmitted infections

Substance Dependence:

The criteria for substance dependence are outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM IV). Substance dependence is characterized as a maladaptive pattern of substance use leading to clinically significant impairment or distress. The user experiences a physiological and/or psychological need for the drug. Substance dependence is manifested by three (or more) of the following, occurring at any time in the same 12-month period:

- Tolerance;
- Withdrawal;
- Increased quantity and duration of substance taken;
- Desire or unsuccessful efforts to cut down;
- Activities given up as a result of substance use;
- The use is continued despite knowledge of having a persistent or recurrent physical or psychological problem caused or exacerbated by the substance use.

WIDE:

Winnipeg Injection Drug Epidemiology Study